

EXHIBIT A

WORK-O-LITE COMPANY, INC.

July 28, 2005

Mr. Bob Blanchard
American Finishing
123 NJ Railroad Avenue
Newark, NJ 07105

Mr. Joe Mesa
Bridge Metal Work
717 South 3rd Avenue
Mt. Vernon, NY 10550

Blaise Fredela
Bridge Metal Work
717 South 3rd Avenue
Mt. Vernon, NY 10550

Dear Sir or Madam:

In connection with a potential transaction (the "Transaction") involving National Lighting Company, Inc., Work-O-Lite Company, Inc. (together with National Lighting Company, Inc., the "Company"), Galaxy Switchgear, Inc. and Bridge Metal Works, Inc. (together with GALaxy Switchgear, Inc., the "Enquirers"), the Enquirers have requested and will be provided with certain non-public or confidential information concerning the Company, including without limitation, technical information, formulas, pricing, manufacturing drawings, documents, data, or information, relating to devices, methods, materials, ideas, plans, processes, apparatus, designs, drawings, research, yields, or specifications. All such information so furnished is hereinafter referred to as "Confidential Information." In consideration of the Enquirers being furnished with such Confidential Information, the Enquirers agree as follows:

1. The Confidential Information will be kept confidential and will not, without the prior written consent of the Company, be disclosed by the Enquirers or their agents, employees or representatives (which term shall include the Enquirers' directors, officers, financing sources, advisors, counsel and accountants) ("Representatives"), in any manner whatsoever, in whole or in part. The Enquirers agree to disclose the Confidential Information only to its Representatives who need to know the Confidential Information for the purpose of evaluating the Transaction and who are informed by the Enquirers of the confidential nature of such information.

2. All information and materials disclosed by the Company to the Enquirers or their Representatives shall be presumed to constitute Confidential Information and will be so regarded by the Enquirers. Confidential Information does not include information or records which (i) was or becomes generally available to the public other than as a result of a disclosure by the Enquirers or their Representatives, (ii) was or becomes available to the Enquirers on a non-confidential basis prior to its disclosure to the Enquirers or their Representatives by the Company or its Representatives or (iii) was or becomes available to the Enquirers on a non-confidential basis from a source (other than the Company or its Representatives) which has represented to the Enquirers that it is not bound by a confidentiality agreement with the Company or otherwise prohibited from transmitting any portion of the information by a contractual, legal or fiduciary obligation.

3. If the transaction is not consummated, the Enquirers will, and will cause each of their Representatives to, upon request, return to the Company or destroy the originals and all copies of Confidential Information and the Enquirers will, and will cause each of its Representatives to, upon request, destroy all copies of any analyses, compilations, studies or other documents prepared by or for the Enquirers' internal use which reflect or were prepared based upon the Confidential Information.

4. In the event the Enquirers or their Representatives are requested or required in any legal proceeding (by interrogatories, deposition requests for information or document subpoena or similar process) to disclose any Confidential Information, it is agreed that the Enquirers will provide the Company with prompt notice of such request(s) so that the Company may seek an appropriate protective order and/or waive compliance with the provisions of this Agreement. If, in the absence of a protective order or the receipt of a waiver hereunder, the Enquirers or their Representatives are nonetheless, in the written opinion of counsel furnished to the Company at least five business days prior to the date on which such disclosure is required, compelled to disclose Confidential Information or else stand liable for contempt or suffer other censure or penalty, the Enquirers or their Representatives, as the case may be, may, no earlier than the day on which it is last permitted to respond, disclose only such of the Confidential Information to the party compelling disclosure as counsel advises in writing is required by law, and will assist the Company in obtaining reliable assurance that confidential treatment will be accorded such Confidential Information. In any event, neither the Enquirers nor any of or their Representatives will oppose any action by the Company to obtain an appropriate protective order or other reliable assurance that confidential treatment will be accorded the Confidential Information.

5. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without regard to principles of choice or conflicts of law.

6. The terms of this Agreement shall be effective for a period of five years from the date of execution.

Please acknowledge your acceptance of the foregoing by signing this letter below.

Very truly yours,

National Lighting Company, Inc.


By: 

Work-O-Lite Company, Inc.

By: 

ACKNOWLEDGED AND ACCEPTED:

American Finishing


Bob Blanchard


Bridge Metal Work

Joe Mesa MESSA

Bridge Metal Work


Blaise Fredela FREDELA

Dated: July __, 2005

EXHIBIT B

July __, 2005

Galaxy Switchgear, Inc.
[address]

Bridge Metal Work, Inc.
[address]

Ladies and Gentlemen:

This letter of intent sets forth our mutual understanding concerning the terms and conditions of a transaction among Galaxy Switchgear, Inc., a New York corporation ("Galaxy") and Bridge Metal Work, Inc., a New York corporation, ("Bridge Metal" and together with Galaxy, "Buyer"), National Lighting Company, Inc., a New Jersey corporation (the "Company" or the "Seller" or "National Lighting") and Work-O-Lite Company, Inc., a New Jersey corporation ("Work-O-Lite"). This letter of intent outlines the parameters of a possible transaction and the parties to this letter of intent do not intend to create a legally binding agreement between them. A legally binding commitment will only result after the drafting, negotiation, execution and delivery of a definitive agreement and the obtaining of all necessary third party consents. The date of the signing of the definitive agreement is the Closing Date.

1. Asset Acquisition. Buyer shall purchase certain assets of Seller including goodwill, the right to the National Lighting name, catalog rights, product rights, intellectual property rights, and various tools and die, all as listed on Schedule A (the assets to be purchased are referred to herein as the "Assets"). Buyer shall not purchase, and Seller shall not sell to Buyer, the following assets of Seller: accounts receivable, inventory, cash, any machinery or equipment owned by Seller, existing sales backlog or open, unfilled orders or payables.

2. Representations and Warranties. The definitive agreement will contain normal representations and warranties.

3. Seller's Current Employees. Buyer and Seller agree to maintain this transaction in confidence and not share the subject of this transaction with any of Seller's current employees.

4. Closing Date. The Closing Date shall be _____, 2005 assuming due diligence investigations have been completed by both parties and definitive agreements have been drafted, negotiated, executed and delivered.

5. Payment of Purchase Price and Security

(a) The total purchase price for the Assets shall be \$ _____. The purchase price will be payable as per agreed payment plan with an initial payment of \$ _____ paid on the Closing Date. One year after the Closing Date, Buyer shall pay Seller \$ _____ with an accrued interest charge of the prime rate (as such term is published from time to time in the Wall Street Journal) (the "Interest Rate"). Two years after the Closing Date, Buyer shall pay Seller \$ _____ plus interest at the Interest Rate. Three years after the Closing Date, Buyer shall pay Seller \$ _____ plus interest at the Interest Rate. Four years after the Closing Date, Buyer shall pay Seller \$ _____ plus interest at the Interest Rate. Five years after the Closing Date, Buyer shall pay Seller \$ _____ plus interest at the Interest Rate. Buyer has the right to prepay the outstanding balance at any time.

(b) The purchase price will be secured by a performance bond purchased by Galaxy Bridge for \$10,000,000 renewable annually. As security for the timely and full payment of the note referenced above, the following individuals shall execute personal guarantees in favor of Seller:

6. Exclusive License Agreement

In addition, at the Closing, Buyer and Work-O-Lite shall enter into a license agreement (the "License Agreement"). The License Agreement will cover the following:

(a) Work-O-Lite's right to be the exclusive marketing agent and manufacturer's representative for Buyer. Work-O-Lite shall be exclusively responsible for new product development for Buyer worldwide for the term of the License Agreement.

(b) Work-O-Lite shall purchase all products from Buyer at designated prices with a blanket, "fill or orders placed by National" standing commitment, with agreed upon price increases which shall be no greater than the [manufacturer's wholesale price index as promulgated, from time to time, by the Department of Labor or similar governmental agency which publishes such information] with the exception of the products listed in Schedule B which Buyer agrees not to manufacture and Work-O-Lite shall be permitted to buy elsewhere. Work-O-Lite gives Buyer the right of first refusal on other new products not in Buyer's current product line and as listed on Schedule C and components which it may need to purchase in its course of business. The terms of the purchase of the new products shall be negotiated in good faith. If the parties are unable to reach an agreement in thirty days, Work-O-Lite will pay Buyer net thirty days 2% ten day pay and other discounts to be arranged for prepayment and the parties may jointly develop and have the products manufactured by a third party other than Buyer.

- (c) Buyer shall not manufacture, produce, assemble, distribute or broker, whether under Buyer's own label or under a private label for any other lighting manufacturer, distributor, broker or sales agent without the prior written consent of Work-O-Lite in each instance.
- (d) Buyer shall be responsible for the ground transportation of the goods covered by the License Agreement for goods to be delivered within New York City, Connecticut and New Jersey. The prices quoted in the License Agreement are inclusive of this freight charge. Buyer shall provide adequate insurance on the shipped goods.
- (e) Buyer shall list Work-O-Lite [and Seller] on its Underwriters Laboratories.
- (f) Buyer shall carry product liability insurance with coverage of at least \$10,000,000 and shall list Work-O-Lite [and Seller] as additional insured parties.
- (g) Buyer agrees not to sell, copy, imitate or license any of Seller's product designs without Seller's prior written consent.
- (h) The License Agreement shall contain a mutually agreed upon description of the pricing structure for Work-O-Lite's purchase of Buyer's products.
- (i) The term of the License Agreement shall be 10 years.
- (j) Work-O-Lite, as agent for Buyer, will be able to avail itself of Buyer's factory for purposes of allowing potential Work-O-Lite customers to visit the factory site to inspect it as such customers shall request. Work-O-Lite shall also have access to Buyer's web site and other marketing materials and may incorporate all or any part of that web site and any printed materials into Work-O-Lite's web site or printed materials.
- (k) To ensure Buyer's performance as the sole supplier of lighting products to Work-O-Lite, at Closing Buyer shall deliver to Work-O-Lite a performance bond, in the minimum amount of \$ _____, issued by a company with a Best rating of A or better licensed to conduct business within the State of New Jersey or New York. That performance bond shall state that it is issued to fully secure Buyer's entire timely fulfillment of its obligations to Work-O-Lite under the terms of the License Agreement and shall be renewed annually for each year during the term of the License Agreement. In the event the performance bond is not renewed by the company issuing it and is not replaced by a similar performance bond prior to the time of the expiration of the existing performance bond, it shall constitute a material breach by Buyer of its obligations under the License Agreement and Work-O-Lite shall immediately be released from any of its obligations under the License Agreement; the name "National" shall immediately revert back to the Seller and Work-O-

Lite shall be free to enter into another licensing agreement with another third party to have that party fulfill any orders for lighting fixtures that National may have.

8. Right To Use Seller's Name. So long as Buyer is not in default under terms of either the definitive asset purchase agreement or the License Agreement, Buyer may use Seller's name for the conduct of its business. Seller shall not be responsible, in any fashion, for any liabilities or obligations of Buyer from and after the Closing Date.

9. Expenses. The parties shall pay their own expenses in connection with the legal transactions contemplated by this letter of intent.

10. Standstill. Seller and Buyer agree that upon execution and delivery of this letter of intent, and so long as Buyer is proceeding with the transaction in good faith, Seller shall not, for a period of the earlier of the execution and delivery of definitive documents or September 1, 2005, solicit, accept, negotiate, discuss, consider, accept proposals or otherwise take any action, directly or indirectly, in connection with any transaction involving the sale of Seller or its assets.

11. Other Terms and Conditions. The Sales and License Agreements shall contain other Typical terms and conditions including, but not limited to:

(a) The agreements shall be binding upon and inure to the benefit of all parties successors and assigns.

(b) In the event of any dispute, any such dispute shall be resolved exclusively by the Federal or State Courts of New York City, New York County and, in the event of any such dispute, the prevailing party shall be entitled to recover all of its reasonable expenses incurred in connection with such litigation including, but not limited to legal fees, expert fees and court costs.

This letter supersedes all prior correspondence and verbal discussions between Buyer and Seller.

Very truly yours,

National Lighting Company, Inc.

By:

Work-O-Lite Company, Inc.

By:

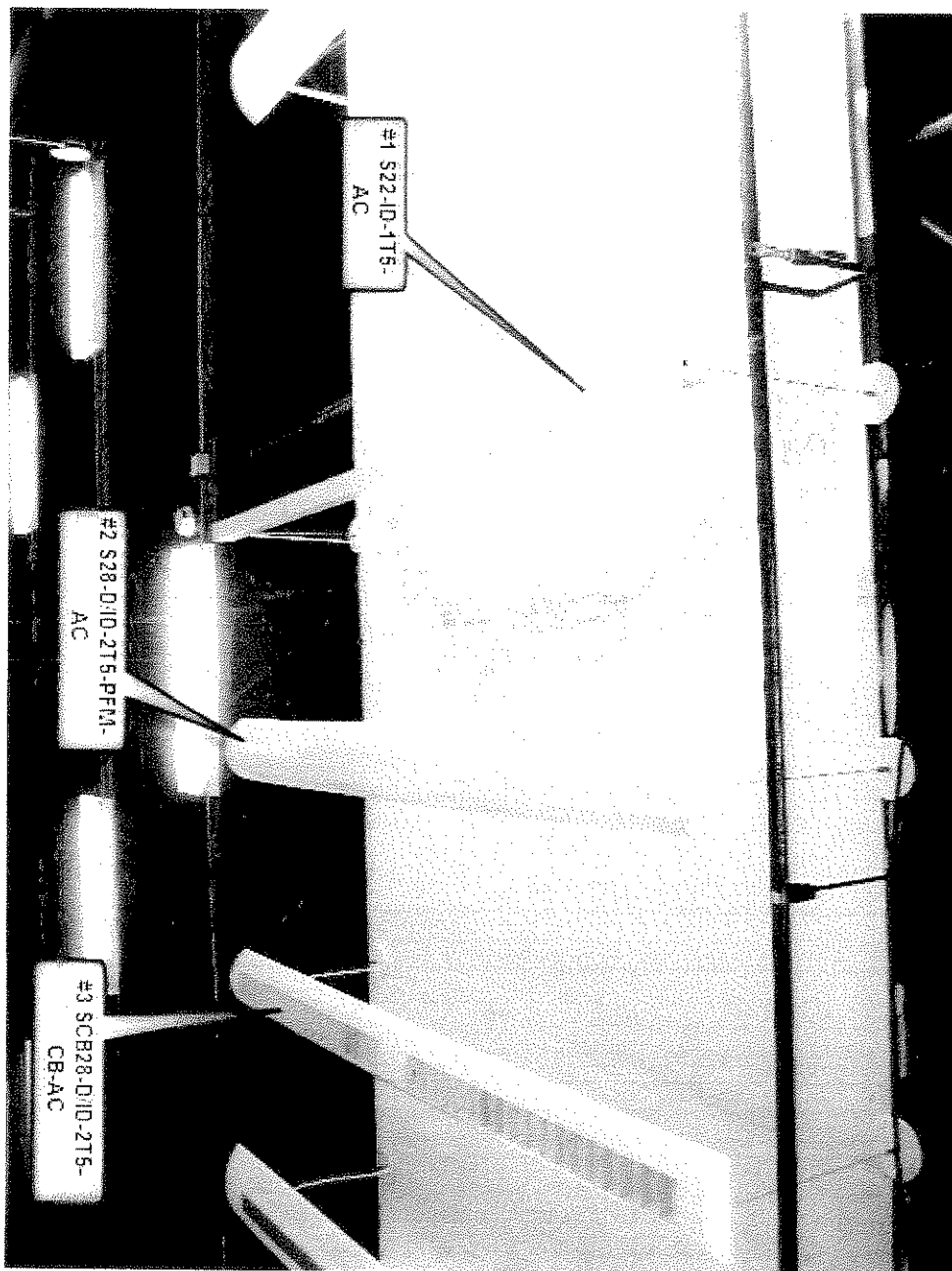
Galaxy Switchgear, Inc.

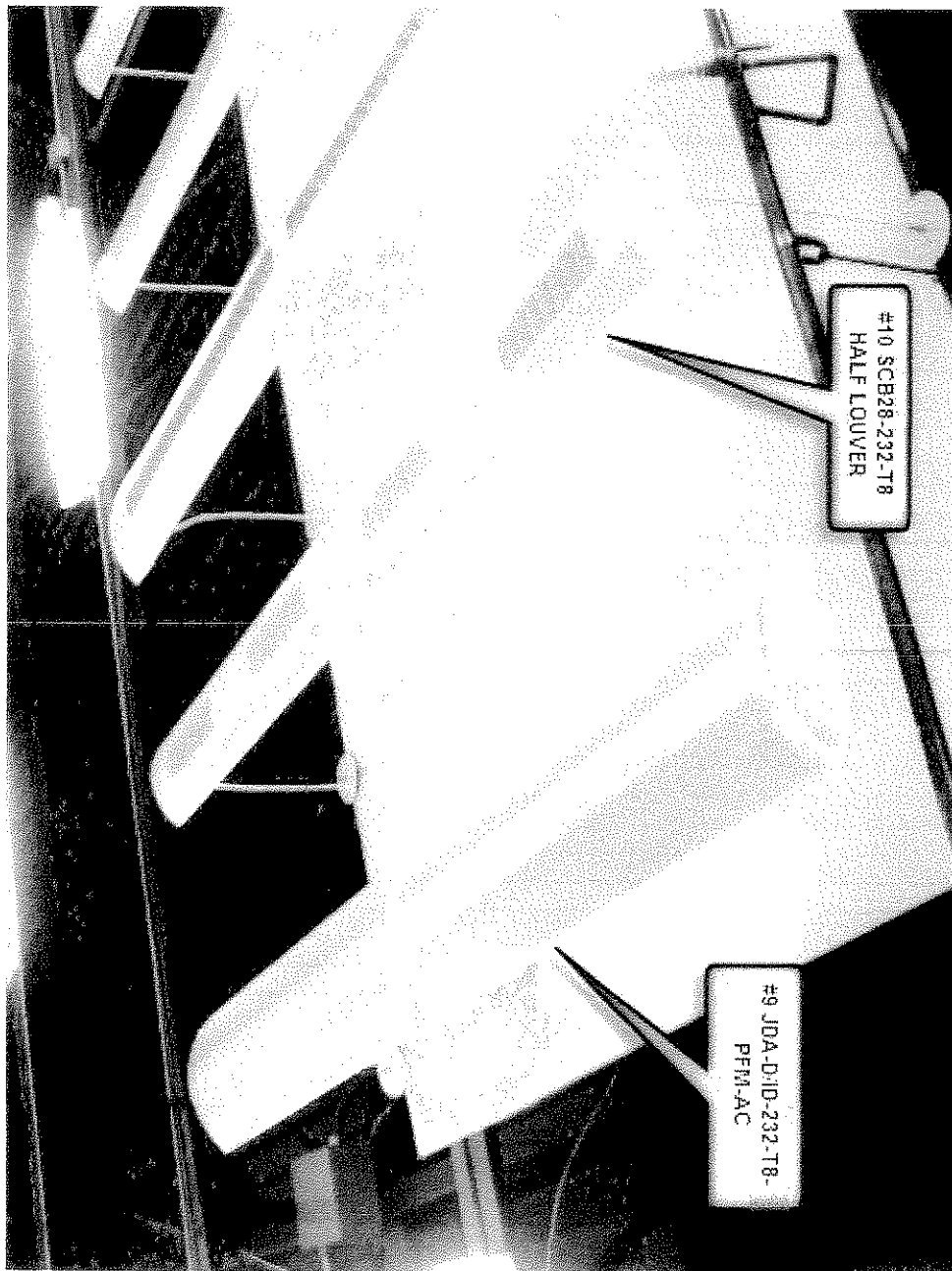
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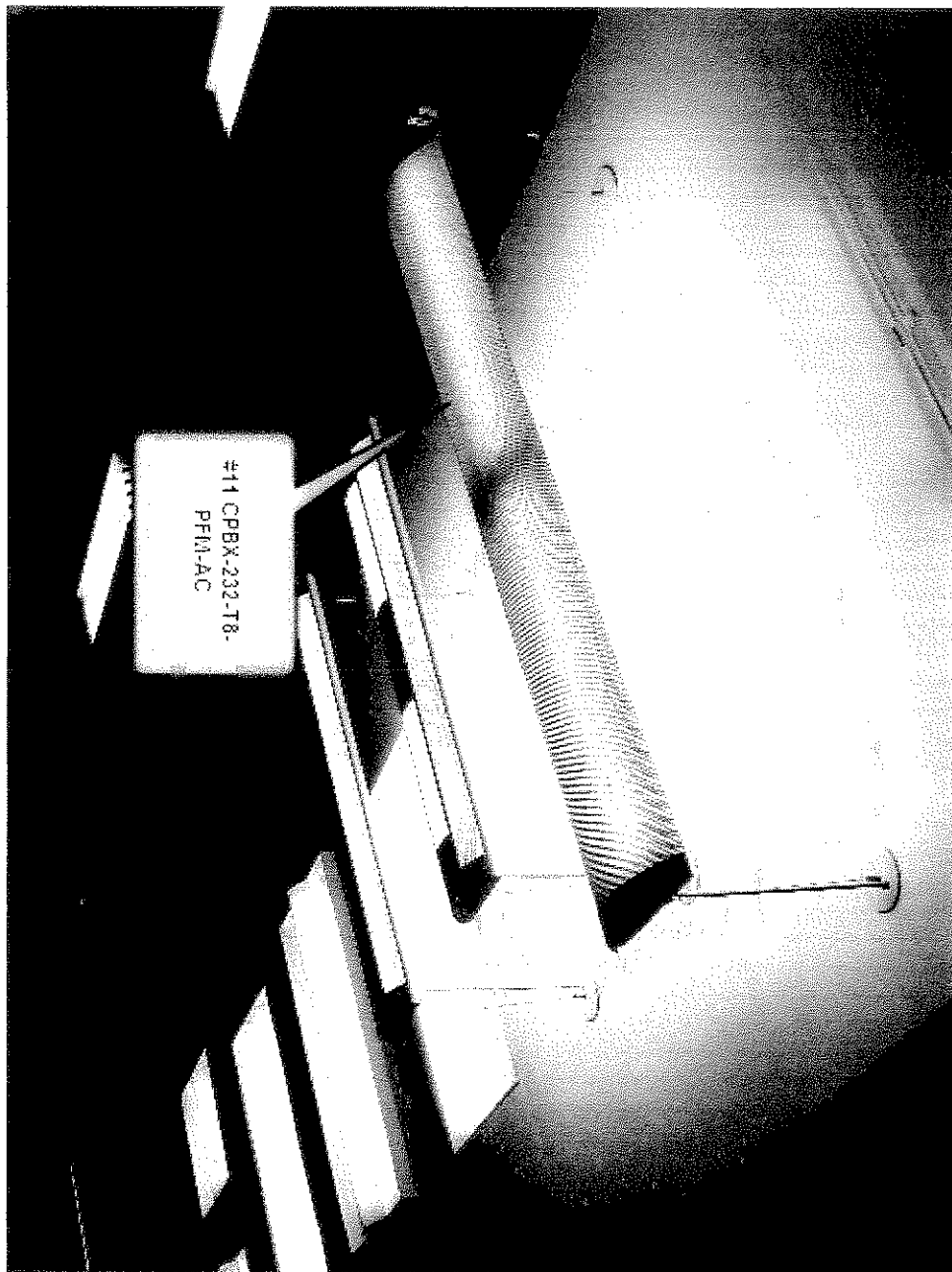
Bridge Metal Work, Inc.

By:

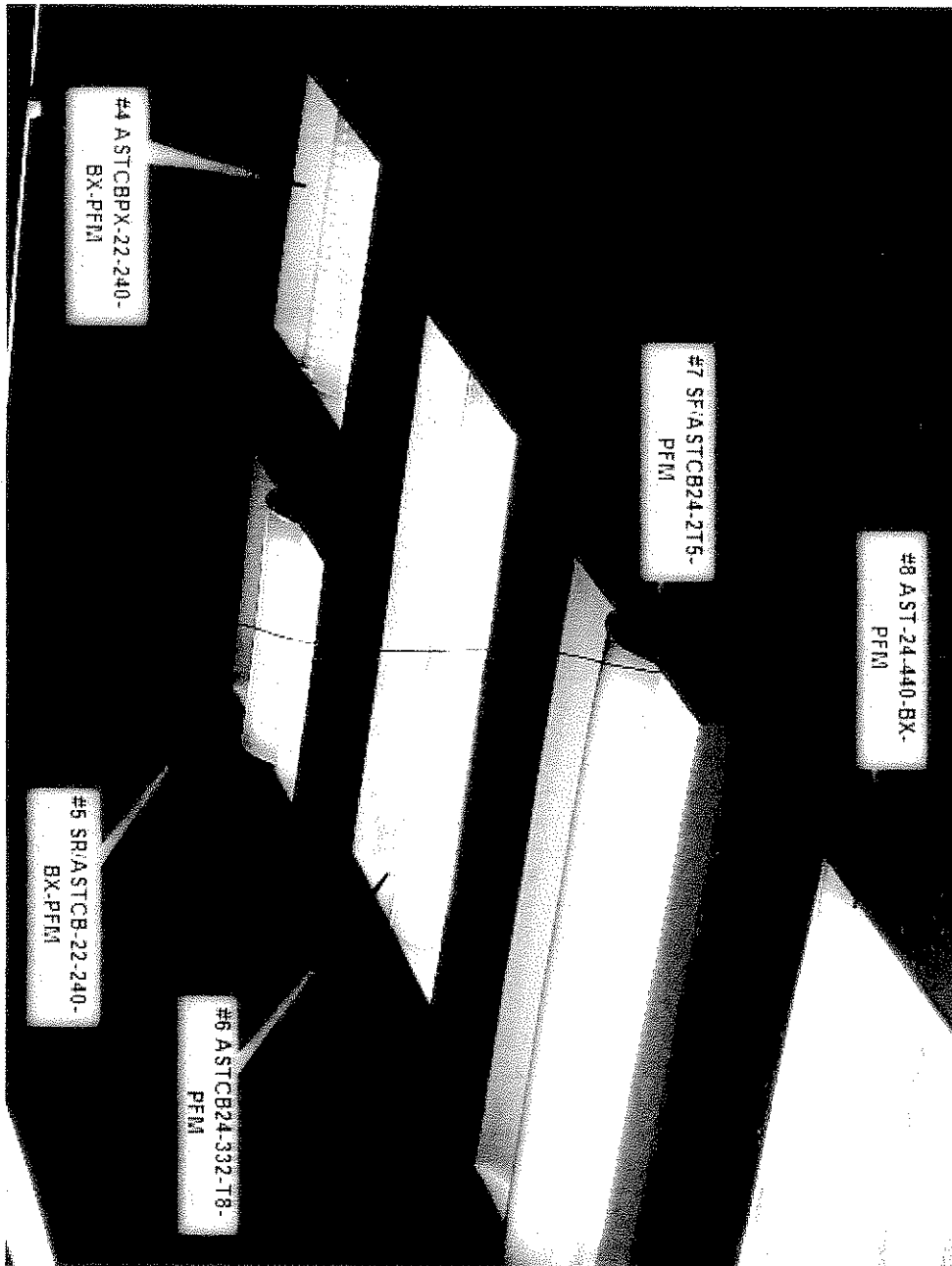
EXHIBIT C

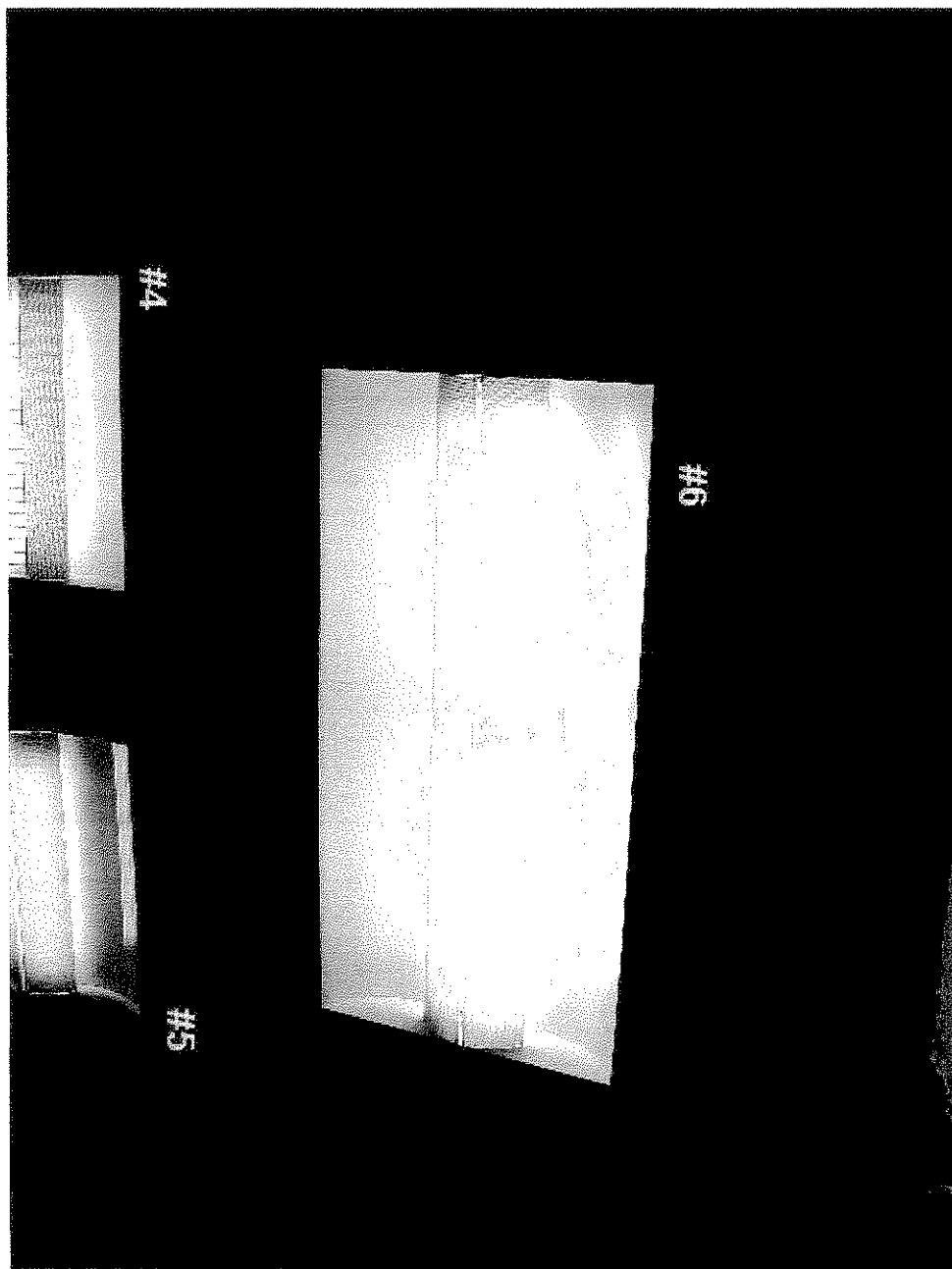


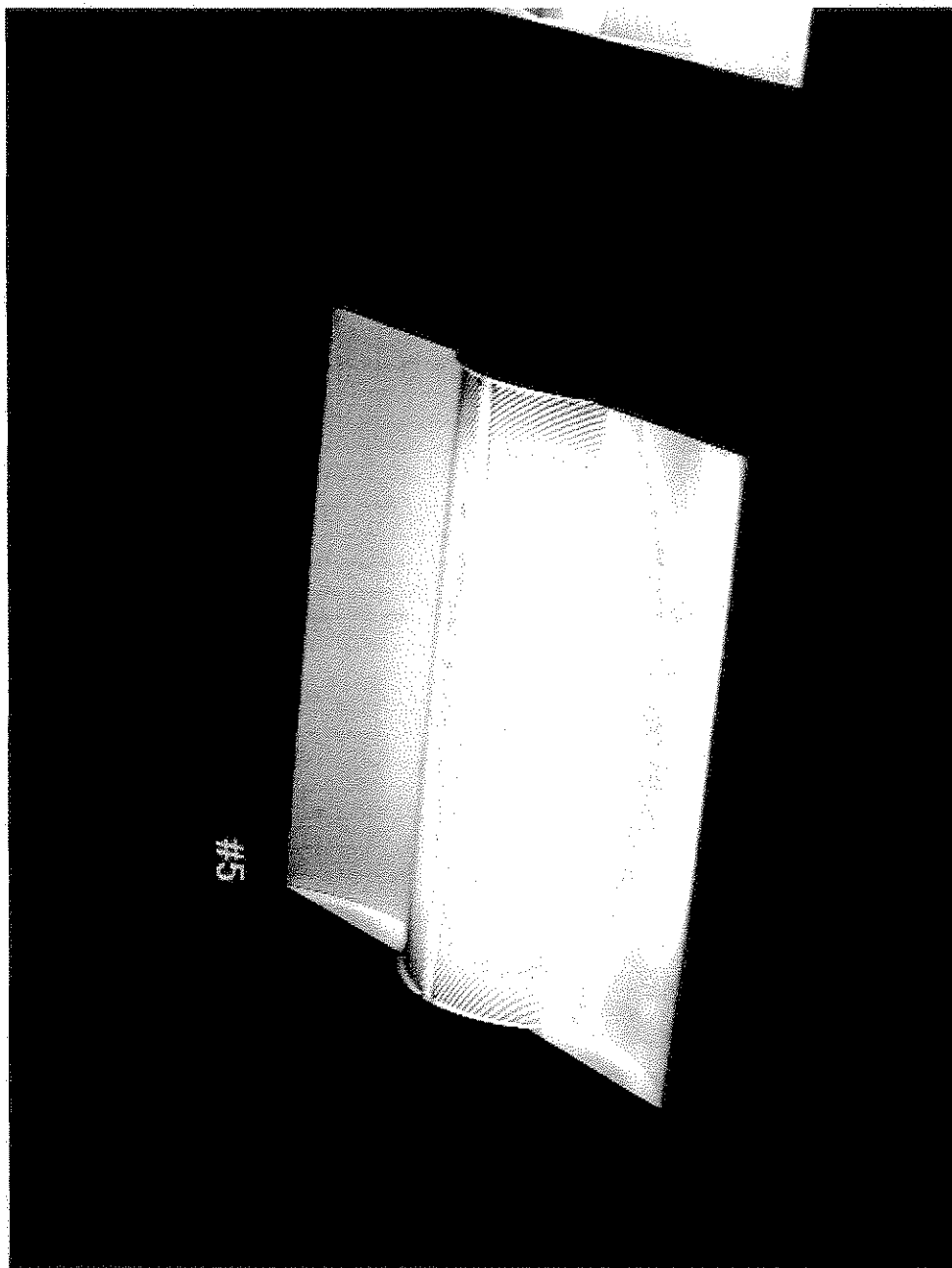












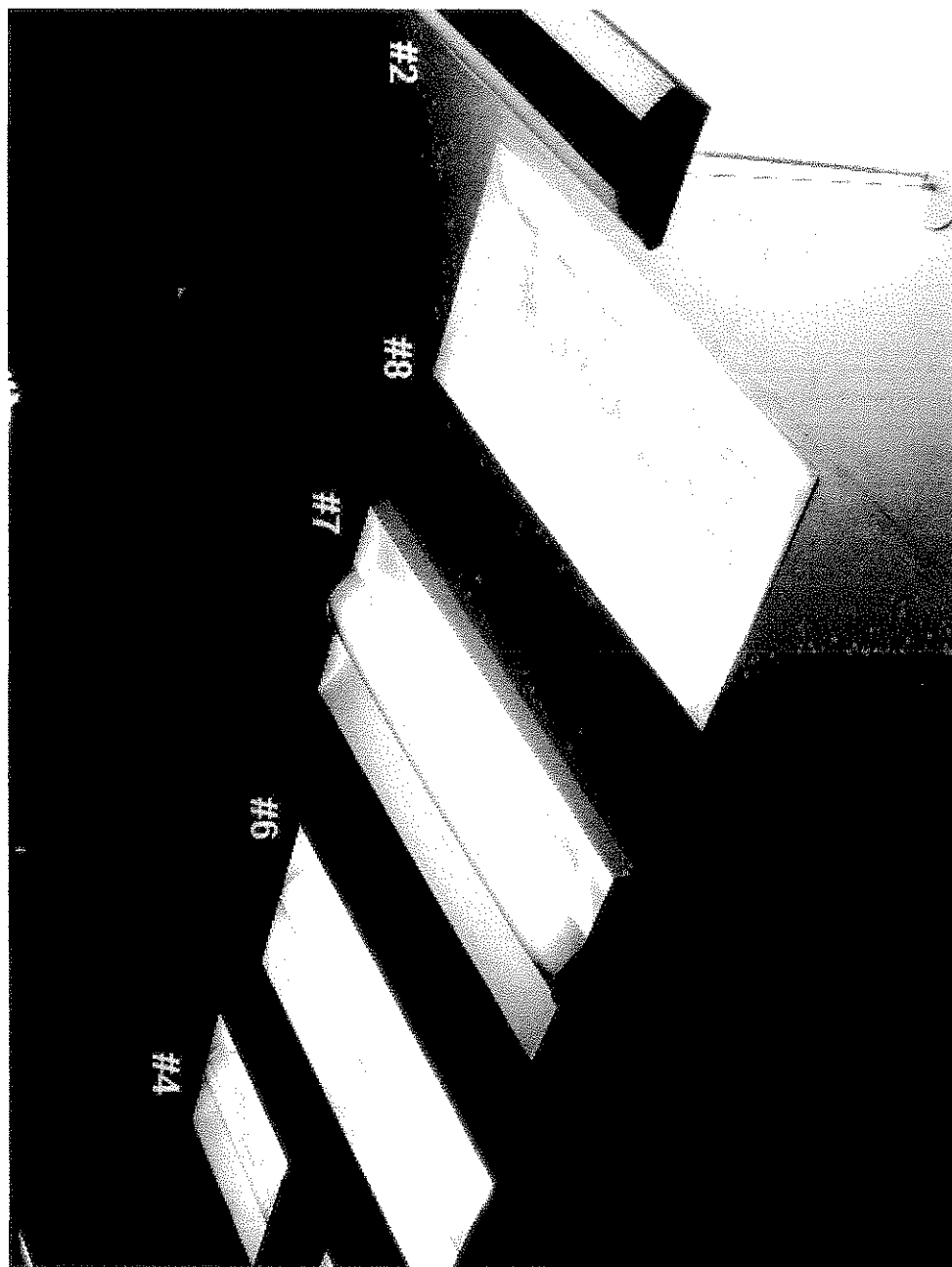
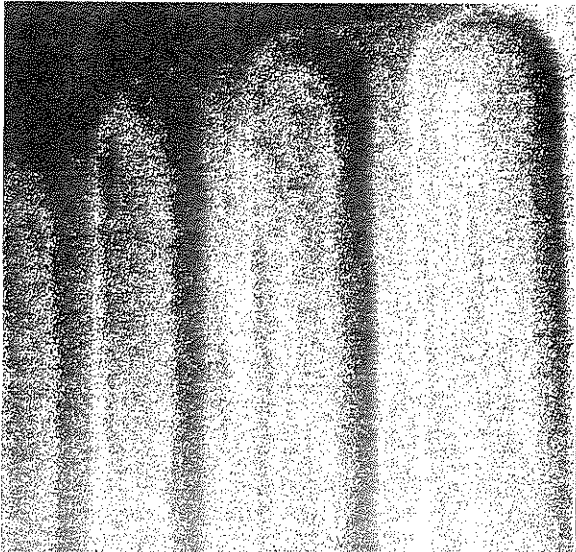
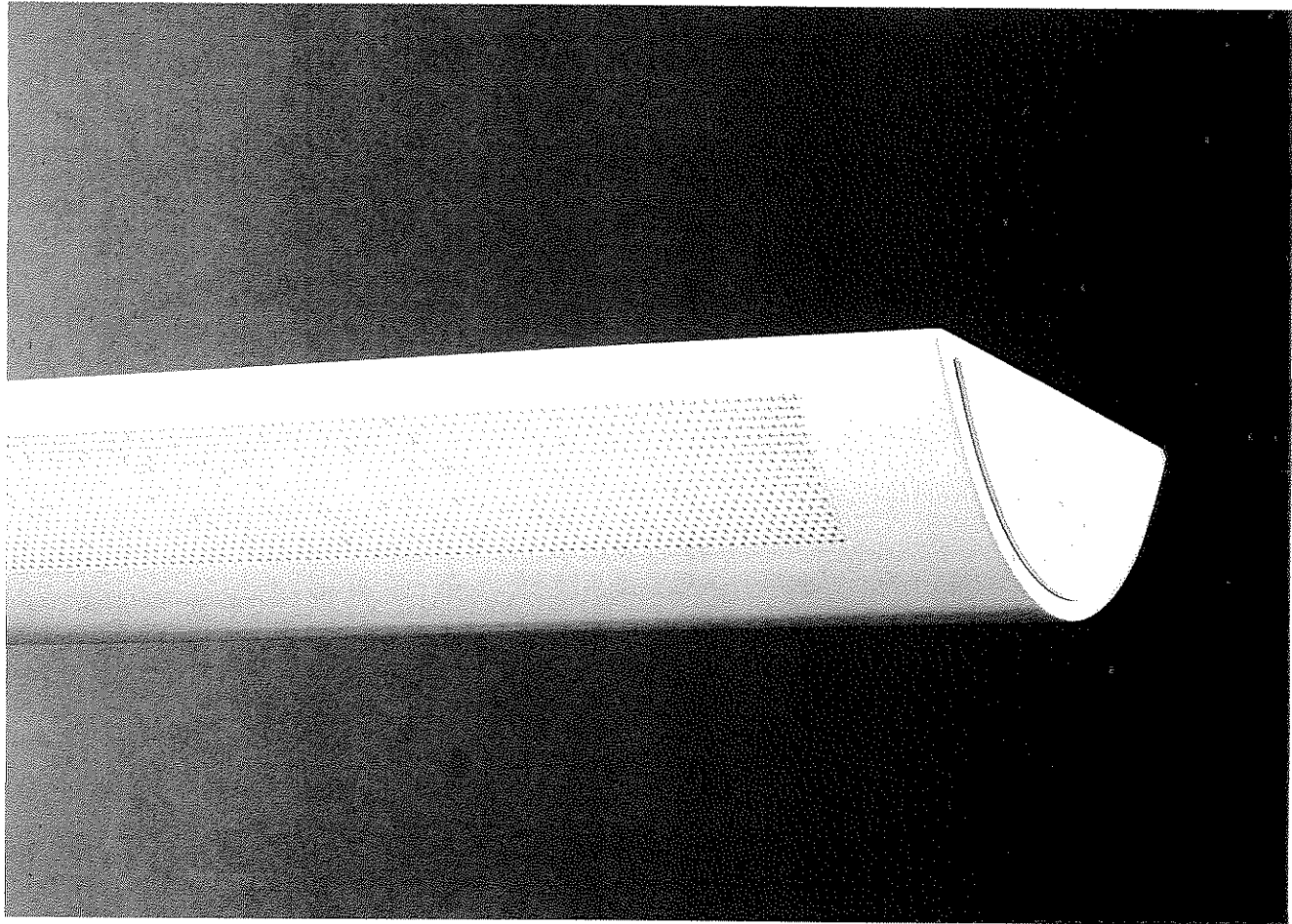


EXHIBIT D

S28

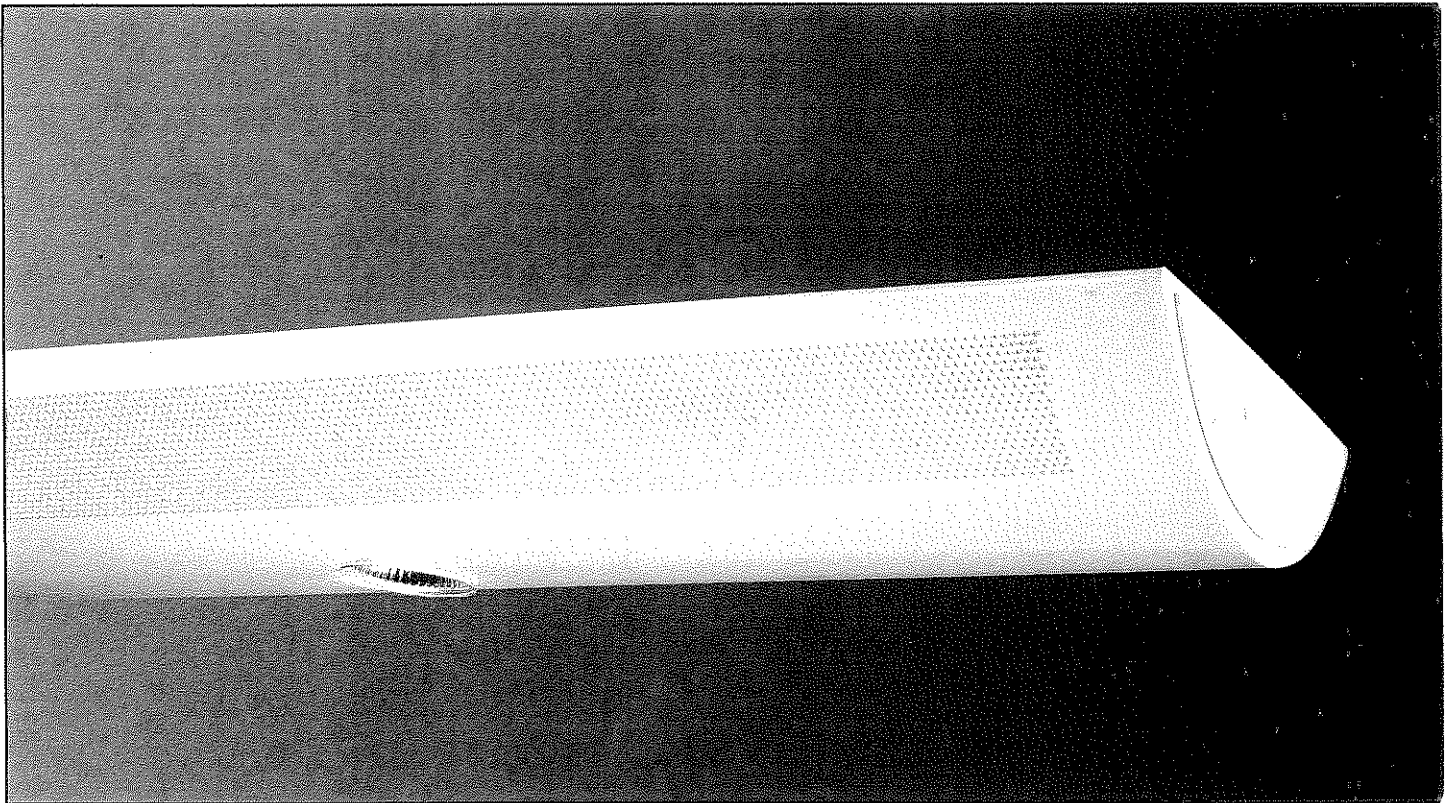
SERIES

#2

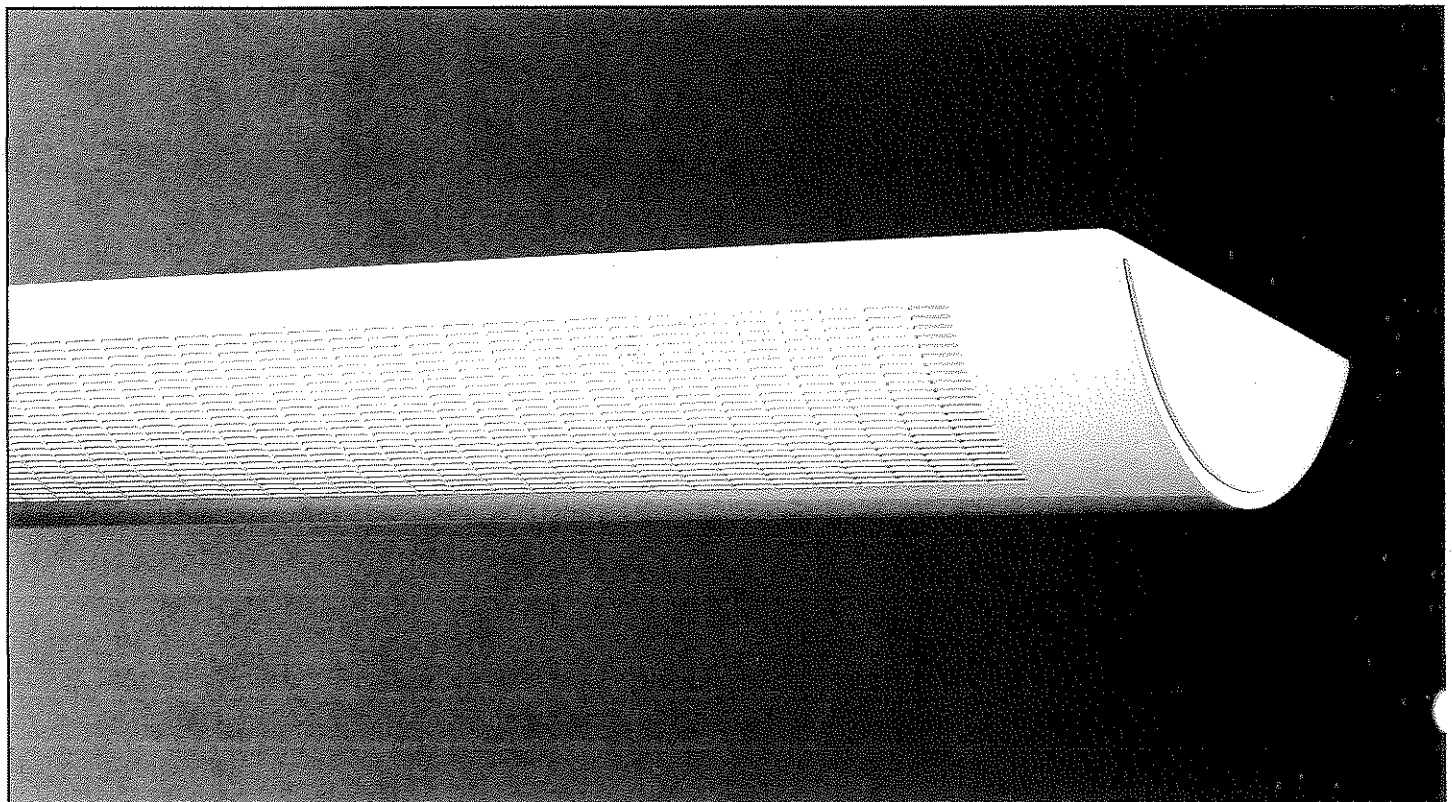


INDIRECT PENDENT MOUNTED

The S28 Series is designed to provide wide, even illumination from a 2-1/2" deep by 8" wide fixture housing. The S28 is fabricated from 18 gauge steel. The reflecting systems are designed for T5, T8, and BIAX lamps, with wide spacing of fixture rows and even ceiling brightness. Perforated sides are available, to enhance the trim design of the S28 series. Contoured cast end caps are available to complete the overall fixture design. Twelve-foot long fixture housings are available.

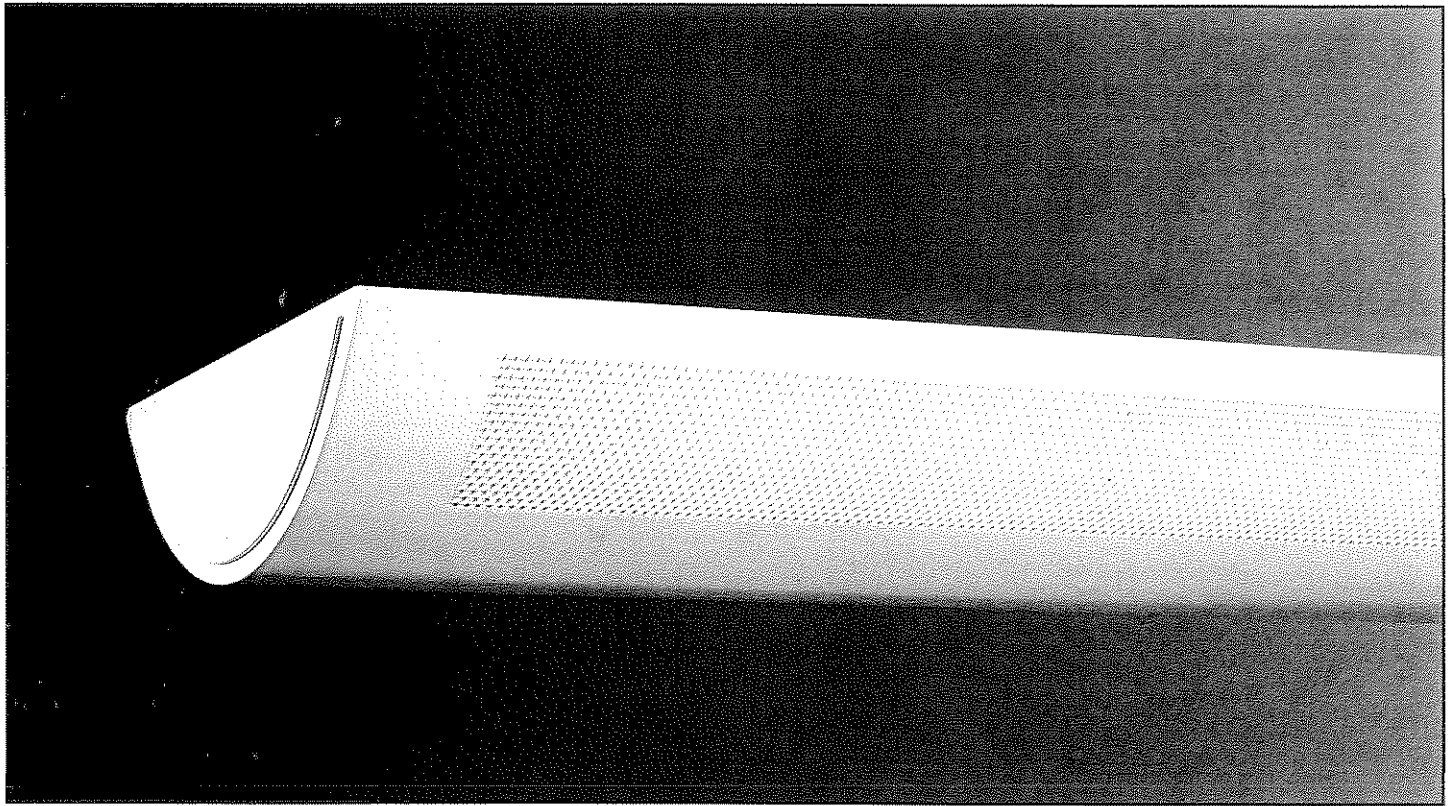


S28 - Perforated with MR Downlights

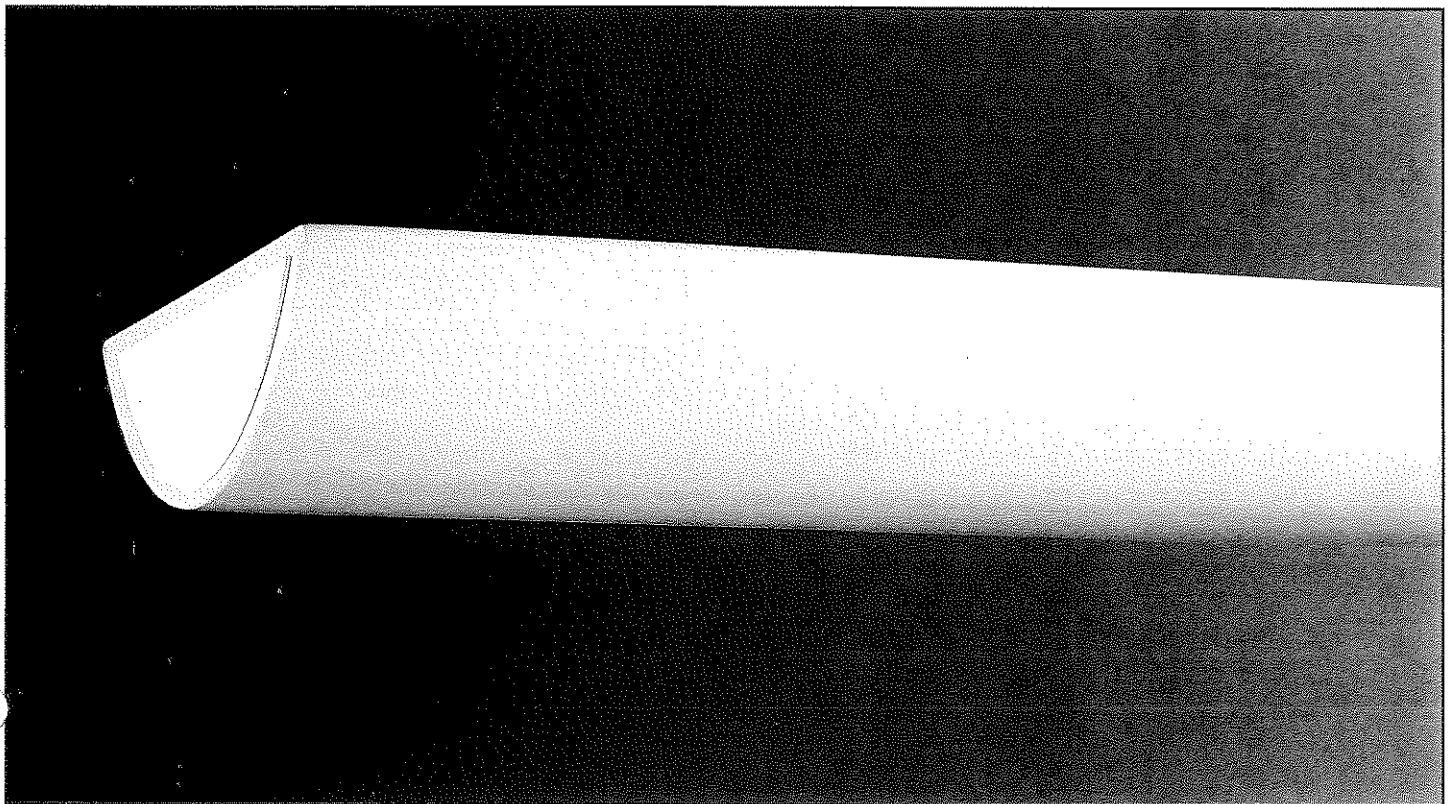


S28 - Slotted

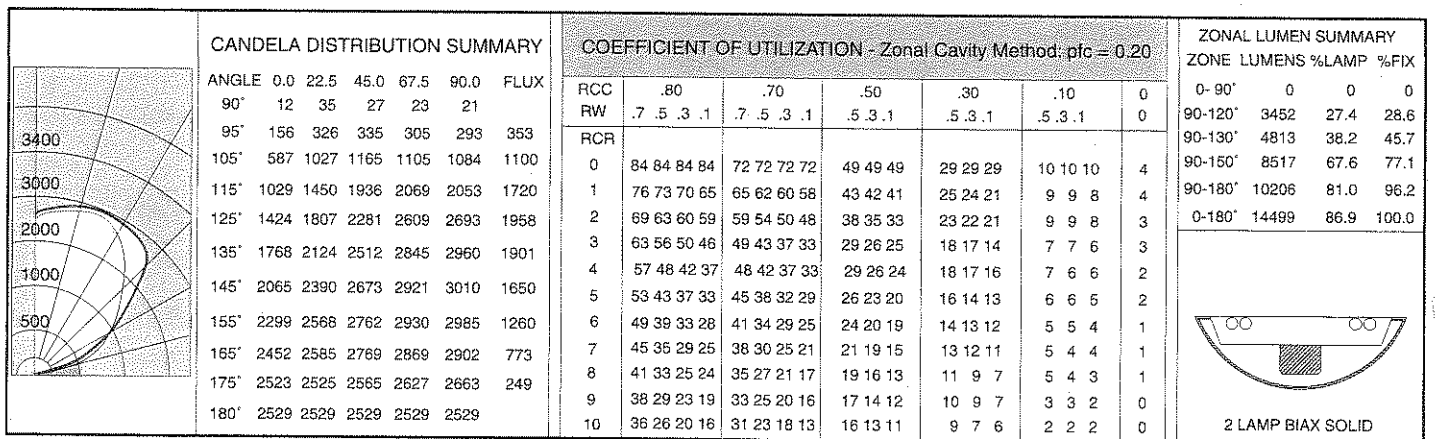
PERFORATED VIEW



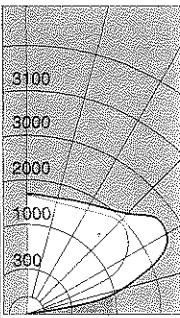
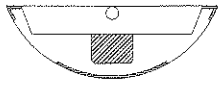
S28 - Perforated

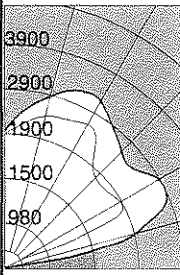
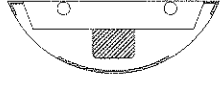


S28 - Solid

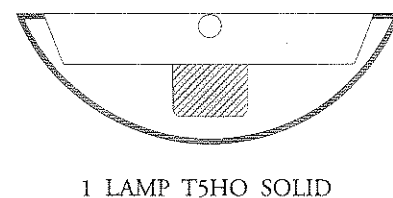
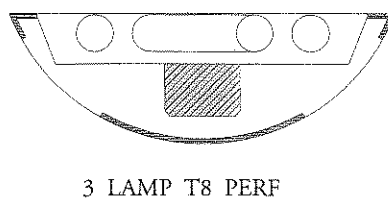
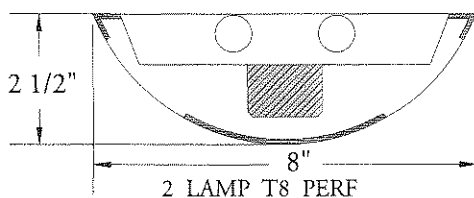
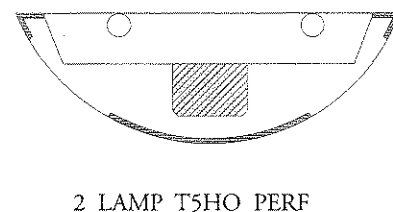
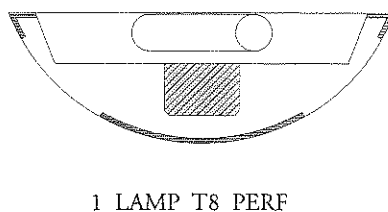
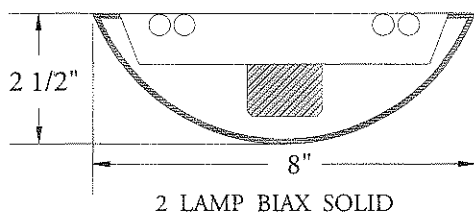


FIXTURE PERFORMANCE

	CANDELA DISTRIBUTION SUMMARY							COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80	.70	.50	.30	.10	0	ZONE	LUMENS	%LAMP	%FIXT
								RW	.7 .5 .3 .1	.7 .5 .3 .1	.5 .3 .1	.5 .3 .1	.5 .3 .1		0-90°	0	0	0
	90°	0	0	0	0	0	0	0	90 90 90 90	77 77 77 77	52 52 52	31 31 31	11 10 9	4	90-120°	1458	29.2	34.5
	95°	31	297	360	315	286	325	1	82 78 75 72	70 67 65 60	46 45 43	28 26 25	8 8 8	3	90-130°	2199	44.0	52.2
	105°	160	474	909	1125	1179	841	2	75 69 61 59	64 59 55 51	41 38 36	24 22 20	7 7 7	2	90-150°	3680	73.6	80.1
	115°	313	525	926	1316	1408	899	3	67 60 54 49	57 52 47 43	36 33 30	21 20 17	6 6 6	2	90-180°	4423	88.5	99.9
	125°	460	582	854	1110	1218	765	4	62 53 46 41	53 46 40 36	32 28 26	19 17 16	6 6 5	1	0-180°	4675	93.7	100.0
	135°	589	675	836	1005	1075	651	5	57 47 40 35	49 41 35 31	29 25 22	17 15 13	5 5 4	1				
	145°	699	741	830	921	975	525	6	51 42 35 30	44 36 31 26	24 22 19	15 14 13	5 4 4	0				
	155°	779	805	848	892	908	393	7	48 37 29 20	40 32 25 25	23 21 20	15 12 11	5 4 4	0				
	165°	836	847	850	863	869	245	8	44 34 27 23	37 30 24 20	20 17 15	12 10 9	4 4 3	0				
	175°	861	866	860	858	856	95	9	41 32 25 22	34 27 20 18	19 14 12	11 9 8	3 3 2	0				
	180°	860	860	860	860	860	860	10	38 28 22 18	33 24 19 16	16 14 12	10 9 6	2 2 1	0				

	CANDELA DISTRIBUTION SUMMARY							COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80	.70	.50	.30	.10	0	ZONE	LUMENS	%LAMP	%FIXT
								RW	.7 .5 .3 .1	.7 .5 .3 .1	.5 .3 .1	.5 .3 .1	.5 .3 .1		0-90°	0	0	0
	90°	0	0	0	0	0	0	0	91 91 91 91	77 77 77 77	53 53 53	31 31 31	11 10 10	4	90-120°	3127	31.1	34.5
	95°	69	461	502	500	469	503	1	73 79 74 71	71 68 65 62	46 45 44	27 25 24	9 8 8	4	90-130°	4600	46.0	52.2
	105°	348	826	1463	1717	1778	1332	2	74 69 63 59	64 59 55 51	41 38 36	24 22 21	7 7 7	3	90-150°	7469	73.7	80.1
	115°	682	1173	1553	2117	2307	1584	3	66 60 54 49	58 52 47 43	36 33 30	21 20 17	7 6 6	2	90-180°	8909	88.1	99.9
	125°	995	1505	1789	1990	2090	1533	4	63 52 46 41	53 46 40 36	31 28 25	20 17 16	6 5 5	2	0-180°	9549	94.5	100.0
	135°	1272	1683	2063	2210	2285	1495	5	56 47 37 35	50 41 35 31	28 25 22	17 16 14	5 5 4	2				
	145°	1505	1800	2168	2378	2432	1300	6	53 42 34 30	45 35 30 27	25 24 23	15 13 12	5 4 4	1				
	155°	1685	1871	2102	2274	2355	961	7	48 38 31 26	41 33 26 23	22 19 17	15 12 10	4 4 4	1				
	165°	1803	1887	2002	2081	2119	564	8	45 33 27 23	38 30 24 20	21 17 15	13 11 10	3 3 2	1				
	175°	1857	1872	1879	1890	1893	188	9	42 31 26 17	35 27 21 18	17 15 12	11 10 8	3 2 2	0				
	180°	1858	1858	1858	1858	1858	1858	10	38 28 20 16	33 24 19 15	17 13 10	10 7 6	2 2 1	0				

FIXTURE PROFILES



FUTURE PERFORMANCE

CANDELA DISTRIBUTION SUMMARY	COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	ZONE	LUMENS	%LAMP	%FIXT
								0-90°	0	0	0
	90°	2	15	33	47	52		90-120°	839	28.9	32.7
	95°	24	97	126	142	147	124	90-130°	1275	44.0	49.7
	105°	117	243	320	363	374	306	90-150°	2052	70.7	79.9
	115°	226	332	443	506	525	409	90-180°	2563	88.4	99.9
	125°	331	396	510	577	601	437	0-180°	2567	88.5	100.0
	135°	424	464	548	614	635	416				
	145°	502	524	578	622	639	360				
	155°	562	574	602	626	635	277				
	165°	602	607	619	628	630	176				
	175°	623	623	627	626	625	60				
	180°	626	626	626	626	626					



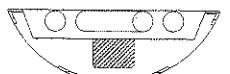
1 LAMP T8 PERF

CANDELA DISTRIBUTION SUMMARY	COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	ZONE	LUMENS	%LAMP	%FIXT
								0-90°	0	0	0
	90°	0	0	0	0	0		90-120°	1569	27.4	34.1
	95°	26	143	98	112	83	125	90-130°	2499	43.1	54.2
	105°	150	512	653	677	620	588	90-150°	3949	68.1	82.5
	115°	315	615	996	1180	1200	875	90-180°	4779	82.4	100.0
	125°	477	697	1069	1331	1397	905	0-180°	4779	82.4	100.0
	135°	626	789	1045	1259	1360	792				
	145°	757	866	1030	1173	1244	640				
	155°	860	929	1022	1104	958	438				
	165°	930	959	1005	1035	1054	285				
	175°	970	971	975	974	980	95				
	180°	966	966	966	966	966					



2 LAMP T8 PERF

CANDELA DISTRIBUTION SUMMARY	COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	ZONE	LUMENS	%LAMP	%FIXT
								0-90°	29.6	3.4	4.2
	90°	3	20	38	45	60		90-120°	2383	27.4	28.6
	95°	46	187	195	227	204	212	90-130°	3323	38.2	45.7
	105°	301	675	792	793	746	740	90-150°	5881	67.6	77.1
	115°	617	935	1303	1508	1507	1183	90-180°	7047	81.0	96.2
	125°	910	1179	1449	1721	1812	1279	0-180°	7317	84.1	100.0
	135°	1173	1384	1619	1767	1843	1216				
	145°	1395	1571	1720	1870	1913	1068				
	155°	1571	1655	1803	1860	1896	816				
	165°	1687	1696	1778	1837	1837	503				
	175°	1743	1734	1731	1722	1729	166				
	180°	1733	1733	1733	1733	1733					



3 LAMP T8 PERF

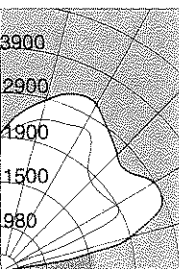
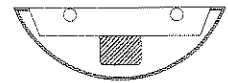
CANDELA DISTRIBUTION SUMMARY	COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY			
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	ZONE	LUMENS	%LAMP	%FIXT
								0-90°	0	0	0
	90°	0	18	12	11	8		90-120°	3326	26.4	27.9
	95°	248	780	732	741	733	1542	90-130°	4561	36.2	44.8
	105°	575	1210	1815	1652	1581	2889	90-150°	8265	65.6	74.5
	115°	915	1476	2272	2686	2741	3215	90-180°	9828	78.8	94.2
	125°	1215	1701	2359	2810	3026	3719	0-180°	10672	84.7	100.0
	135°	1485	1910	2407	2782	2940	3169				
	145°	1690	2049	2381	2649	2727	2522				
	155°	1850	2099	2327	2480	2511	1260				
	165°	1935	1998	2165	2269	2280	819				
	175°	1946	2010	2172	2281	2285	832				
	180°	1962	1962	1962	1962	1962					



2 LAMP BIAx PERF

FIXTURE PERFORMANCE

CANDELA DISTRIBUTION SUMMARY								COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20							ZONAL LUMEN SUMMARY				
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80	.70	.50	.30	.10	0	0-90°	0	0	0	
	90°	0	0	0	0	0	0	RW	.7 .5 .3 .1	.7 .5 .3 .1	.5 .3 .1	.5 .3 .1	.5 .3 .1	0	90-120°	1480	29.2	34.5	
	95°	31	297	360	315	286	325	RCR	0	90 90 90 90	77 77 77 77	53 53 53	31 31 31	11 10 9	4	90-130°	2200	44.0	52.2
	105°	160	474	910	1125	1179	841	1	82 79 75 72	70 67 65 60	46 45 44	28 26 25	8 8 8	3	90-150°	3680	73.6	80.1	
	115°	313	525	926	1316	1410	899	2	75 69 62 60	64 59 55 51	41 38 36	24 22 21	7 7 7	2	90-180°	4425	88.5	99.9	
	125°	460	582	854	1110	1220	769	3	68 60 54 49	58 52 47 43	36 33 30	21 20 18	6 6 6	2	0-180°	4685	93.7	100.0	
	135°	589	675	836	1005	1075	651	4	62 53 46 41	53 46 40 36	32 28 26	19 17 16	6 6 5	1	 1 LAMP T5 SOLID				
	145°	699	742	830	921	975	525	5	57 47 40 35	49 41 35 31	29 25 22	17 15 13	5 5 4	1					
	155°	779	805	848	892	908	395	6	52 42 35 30	45 36 31 26	25 22 19	15 14 13	5 4 4	0					
	165°	836	847	852	863	869	245	7	48 37 29 20	40 32 25 25	23 21 20	15 12 11	5 4 4	0					
175°	864	866	860	858	856	95	8	45 34 27 23	38 30 24 20	21 17 15	12 10 9	4 4 3	0						
180°	862	862	862	862	862		9	41 32 25 22	34 27 21 18	19 14 12	11 9 8	3 3 2	0						
								10	39 28 22 18	33 24 19 16	17 14 12	10 9 6	2 2 1	0					

CANDELA DISTRIBUTION SUMMARY								COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20								ZONAL LUMEN SUMMARY											
ANGLE 0.0 22.5 45.0 67.5 90.0 FLUX								RCC .80 .70 .50 .30 .10 0								ZONE LUMENS %LAMP%FIXT											
	90°	0	0	0	0	0	0	RW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	0	0	0	0	
	95°	69	462	502	500	469	503	RCR	0	91	91	91	91	78	78	78	78	53	53	53	32	32	32	11	10	10	4
	105°	350	826	1464	1717	1778	1335	1	73	79	75	72	71	68	65	62	47	45	44	27	25	24	9	8	8	4	
	115°	682	1173	1553	2117	2307	1664	2	75	69	64	59	64	59	55	51	41	38	36	24	23	21	7	7	7	3	
	125°	997	1505	1789	1992	2090	1535	3	69	60	54	49	58	52	47	43	36	33	30	21	20	18	7	6	6	2	
	135°	1272	1683	2063	2210	2285	1495	4	63	53	47	41	53	46	40	36	32	28	26	20	17	16	6	5	5	2	
	145°	1505	1801	2168	2378	2432	1303	5	57	47	37	35	50	41	35	31	28	25	22	17	16	14	5	5	4	2	
	155°	1685	1871	2102	2274	2355	961	6	53	42	35	30	45	36	30	27	25	24	23	15	13	12	5	4	4	1	
	165°	1803	1889	2002	2081	2120	565	7	49	38	31	26	41	33	27	23	23	19	17	14	12	10	4	4	4	1	
	175°	1857	1872	1879	1890	1893	189	8	45	34	28	23	38	30	24	20	21	17	15	13	11	10	3	3	2	1	
180°	1860	1860	1860	1860	1860		9	42	31	26	18	35	27	21	18	18	15	12	11	10	8	3	2	2	0		
								10	38	28	21	17	33	24	19	15	17	13	11	10	7	6	2	2	1	0	
																											
								2 LAMP T5 SOLID																			

SPECIFICATIONS

HOUSINGS: Constructed of die-formed 18-gauge cold rolled steel
Perforations are 0.018 dia. (standard), 74 holes per square inch

FINISH: Baked white enamel

LAMP SHIELDING: Fabricated from perforated metal with overlay diffuser

BALLAST: 120 Volt, 60Hz, Class P Electronic Standard

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO labels

OPTIONS:

PERFORATIONS: 0.018 holes standard - Add Suffix "PFM". Slotted - 0.250 x .0750 Rectangular openings - Add Suffix "SLT"

MR DOWNLIGHTS: Two per 4" section - Add Suffix "MR2"

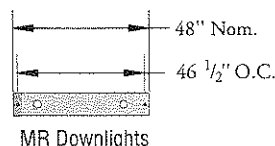
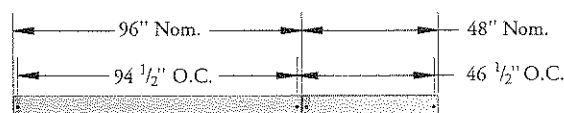
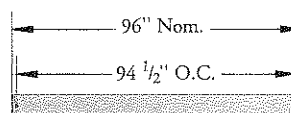
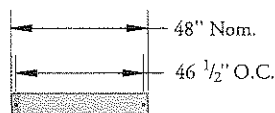
BALLASTS: 277 Volt, dimming ballasts available

MOUNTING: Pendant 1/2" dia. 18" long standard. AC=Aircraft cable. If different lengths are required, specify "P" or "AC" and required lengths. Example AC-24"

CONTOURED END CAPS: Contoured to fit end-of-run housing ends - Use Suffix "CEC"

FINISH: Custom paint finishes are available. Please supply color chip

MOUNTING



ORDINARY INFO

ORDERING KEY

S28



CATALOG NUMBER

NUMBER OF LAMPS

TYPE OF LAMPS

PERFORATIONS (SEE SPECIFICATIONS)

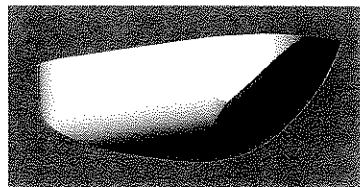
OVERALL LENGTH

OPTIONS (SEE SPECIFICATIONS)

SOLID STEEL HOUSING	(NO.) LAMPS	OVERALL NOMINAL FIXTURE LENGTH	PERFORATED STEEL HOUSING	(NO.) LAMPS	OVERALL NOMINAL FIXTURE LENGTH
S-28-1D-1T5-4'	(1) 4'T5	4'	S-28-1D/D-1T5-4'-PFM	(1) 4'T5	4'
S-28-1D-2T5-4'	(2) 4'T5	4'	S-28-1D/D-2T5-4'-PFM	(2) 4'T5	4'
S-28-1D-2T5-8'	(2) 4'T5	8'	S-28-1D/D-2T5-8'-PFM	(2) 4'T5	8'
S-28-1D-4T5-8'	(4) 4'T5	8'	S-28-1D/D-4T5-8'-PFM	(4) 4'T5	8'
S-28-1D-3T5-12'	(3) 4'T5	12'	S-28-1D/D-3T5-12'-PFM	(3) 4'T5	12'
S-28-1D-6T5-12'	(6) 4'T5	12'	S-28-1D/D-6T5-12'-PFM	(6) 4'T5	12'
S-28-1D-1T5HO-4'	(1) 4'T5HO	4'	S-28-1D/D-1T5HO-4'-PFM	(1) 4'T5HO	4'
S-28-1D-2T5HO-4'	(2) 4'T5HO	4'	S-28-1D/D-2T5HO-4'-PFM	(2) 4'T5HO	4'
S-28-1D-2T5HO-8'	(2) 4'T5HO	8'	S-28-1D/D-2T5HO-8'-PFM	(2) 4'T5HO	8'
S-28-1D-4T5HO-8'	(4) 4'T5HO	8'	S-28-1D/D-4T5HO-8'-PFM	(4) 4'T5HO	8'
S-28-1D-3T5HO-12'	(3) 4'T5HO	12'	S-28-1D/D-3T5HO-12'-PFM	(3) 4'T5HO	12'
S-28-1D-6T5HO-12'	(6) 4'T5HO	12'	S-28-1D/D-6T5HO-12'-PFM	(6) 4'T5HO	12'
S-28-1D-1T8-4'	(1) 4'T8	4'	S-28-1D/D-1T8-4'-PFM	(1) 4'T8	4'
S-28-1D-2T8-4'	(2) 4'T8	4'	S-28-1D/D-2T8-4'-PFM	(2) 4'T8	4'
S-28-1D-3T8-4'	(3) 4'T8	4'	S-28-1D/D-3T8-4'-PFM	(3) 4'T8	4'
S-28-1D-2T8-8'	(2) 4'T8	8'	S-28-1D/D-2T8-8'-PFM	(2) 4'T8	8'
S-28-1D-4T8-8'	(4) 4'T8	8'	S-28-1D/D-4T8-8'-PFM	(4) 4'T8	8'
S-28-1D-6T8-8'	(6) 4'T8	8'	S-28-1D/D-6T8-8'-PFM	(6) 4'T8	8'
S-28-1D-3T8-12'	(3) 4'T8	12'	S-28-1D/D-3T8-12'-PFM	(3) 4'T8	12'
S-28-1D-6T8-12'	(6) 4'T8	12'	S-28-1D/D-6T8-12'-PFM	(6) 4'T8	12'
S-28-1D-9T8-12'	(9) 4'T8	12'	S-28-1D/D-9T8-12'-PFM	(9) 4'T8	12'
S-28-1D-2BX40-4'	(2) 40WBX	4'	S-28-1D/D-2BX40-4'-PFM	(2) 40W-BX	4'
S-28-1D-4BX40-4'	(4) 40WBX	4'	S-28-1D/D-4BX40-4'-PFM	(4) 40W-BX	4'
S-28-1D-4BX40-8'	(4) 40WBX	8'	S-28-1D/D-4BX40-8'-PFM	(4) 40W-BX	8'
S-28-1D-8BX40-8'	(8) 40WBX	8'	S-28-1D/D-8BX40-8'-PFM	(8) 40W-BX	8'
S-28-1D-6BX40-12'	(6) 40WBX	12'	S-28-1D/D-6BX40-12'-PFM	(6) 40W-BX	12'
S-28-1D-12BX40-12'	(12) 40WBX	12'	S-28-1D/D-12BX40-12'-PFM	(12) 40W-BX	12'

NOTE: 50 Watt BIAx Fixtures available. Consult Factory

NOTE: 50 Watt BIAx Fixtures available. Consult Factory



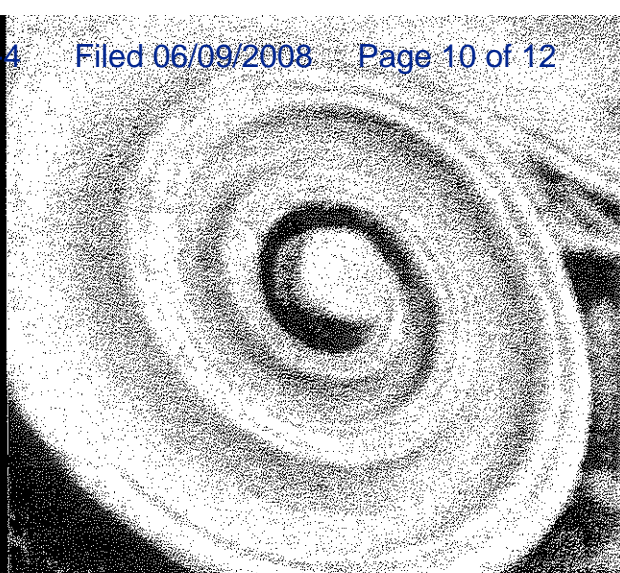
Contoured End



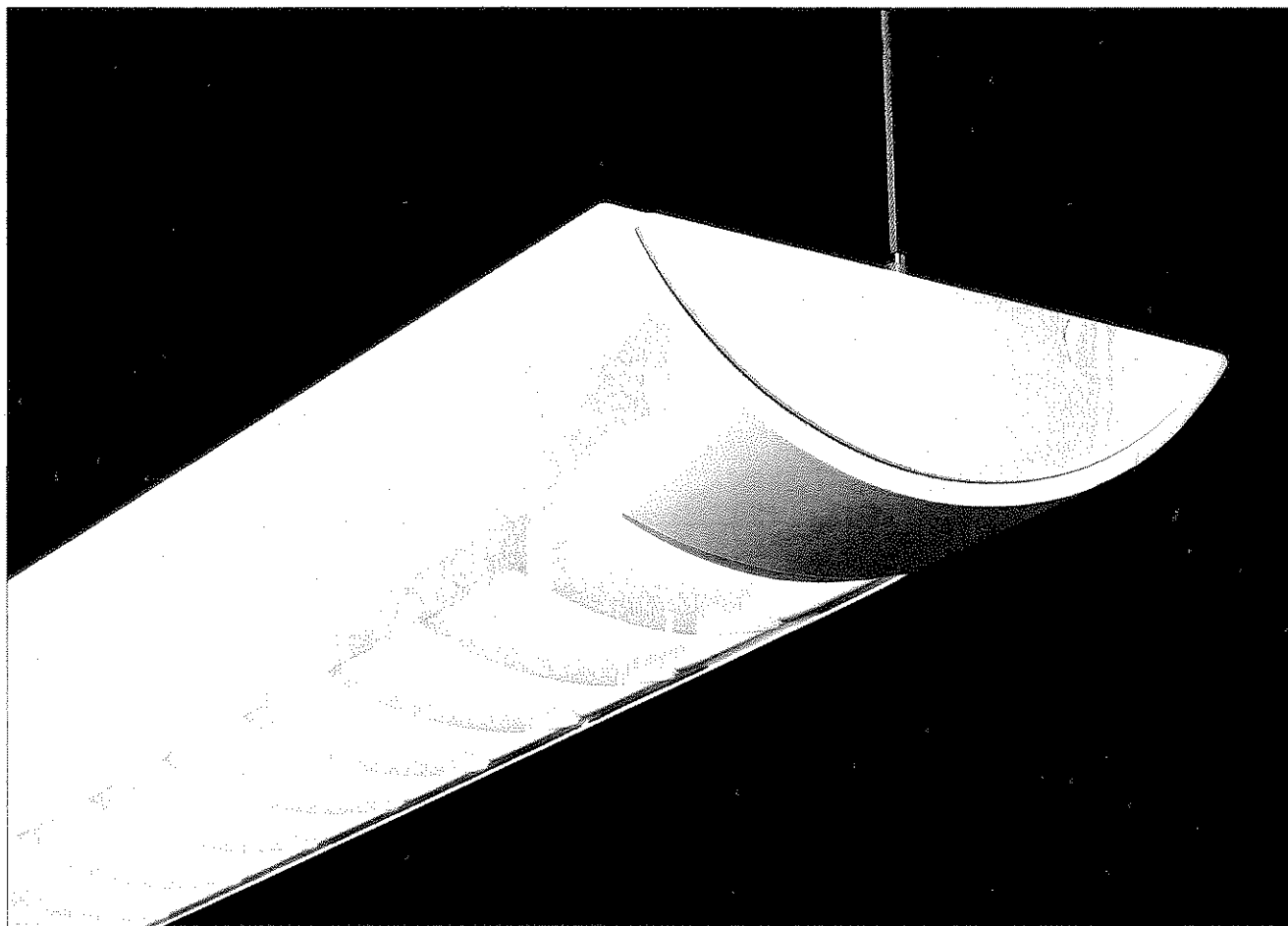
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www.natlgtg.com

SCB 28

S E R I E S



#3



INDIRECT/DIRECT PENDANT MOUNTED

The SCB 28 series is designed to provide wide, even illumination with an indirect/direct lighting distribution. A white contoured cross baffle shields lamps at normal viewing angles.

The reflecting systems are designed for T5, T5HO, T8 and Biax lamps, with wide spacing of fixture rows and even ceiling illuminance.

FIGURE 10A

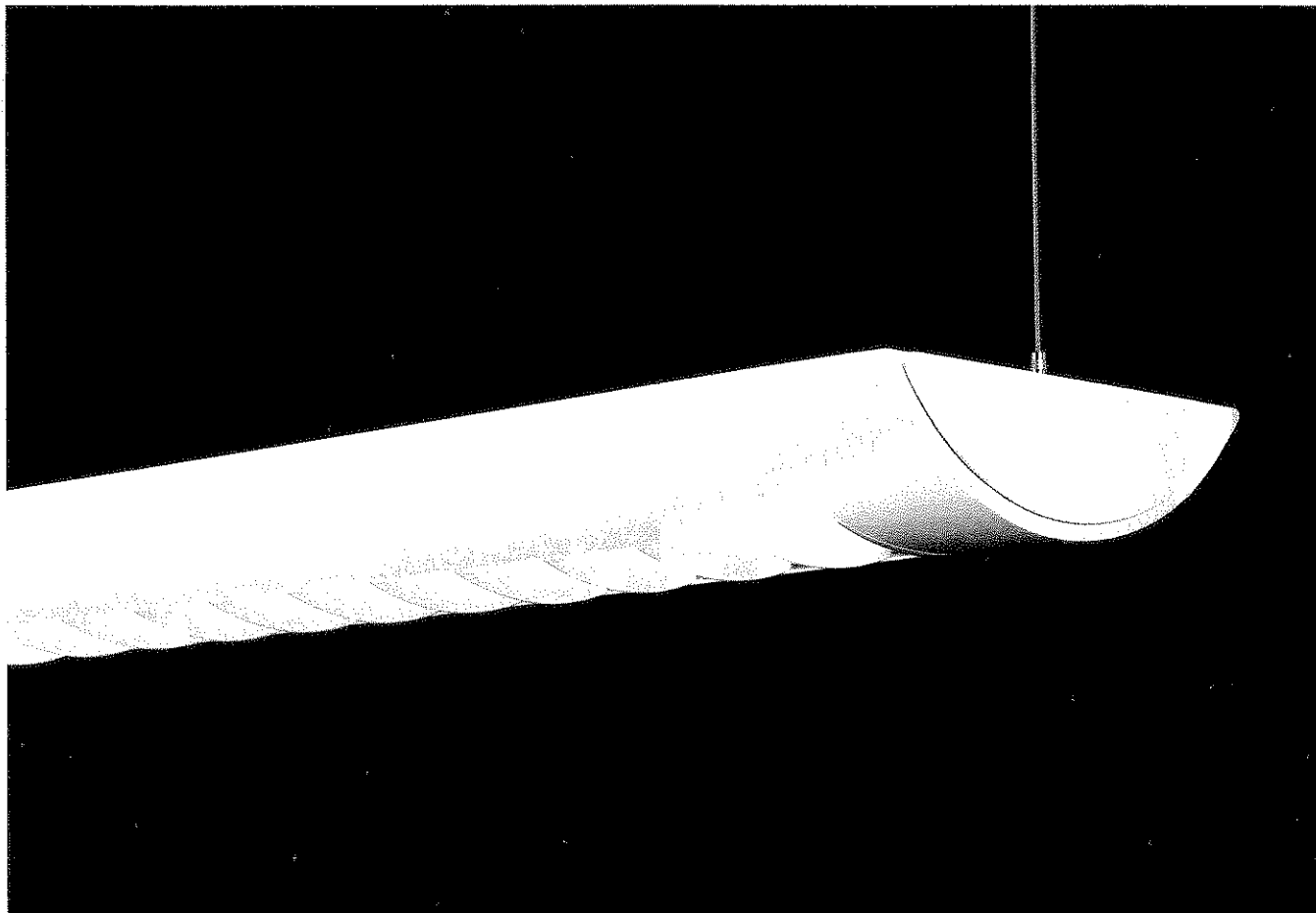
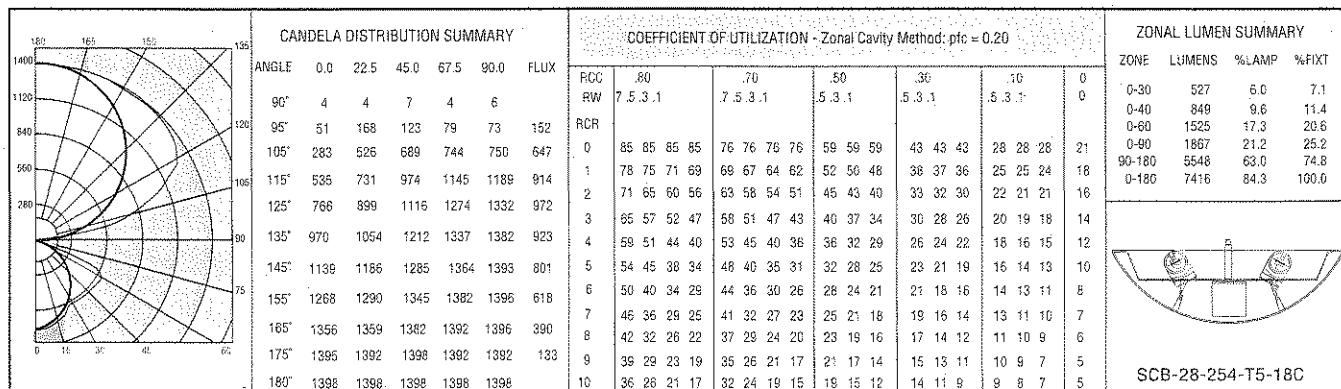
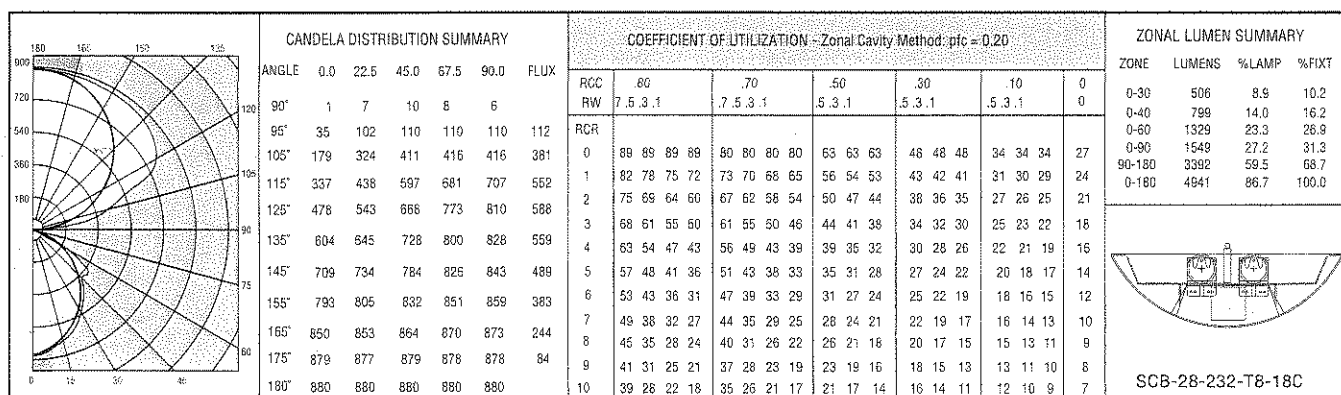


FIGURE 10B LIGHTING DATA



ORDERING KEY

CATALOG NUMBER



SCB-28

CATALOG NUMBER

NUMBER OF LAMPS

TYPE OF LAMPS

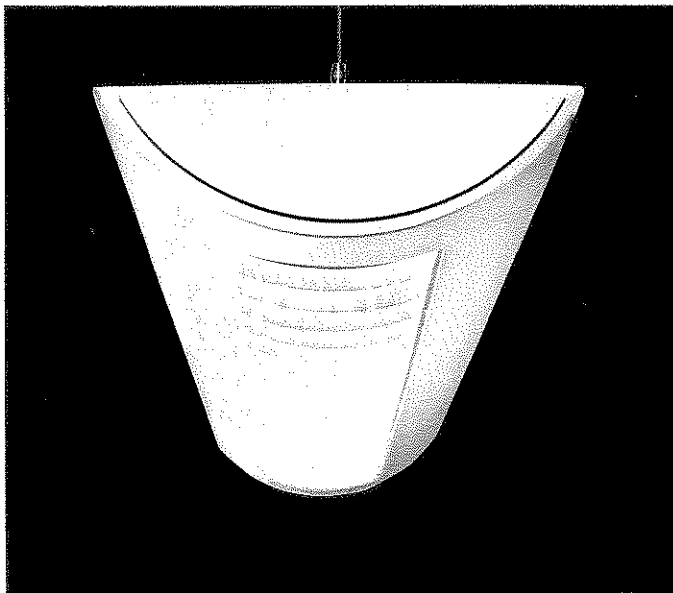
CROSS BAFFLE

OVERALL LENGTH

VOLTAGE

OPTIONS (SEE SPECIFICATIONS)

CATALOG NUMBER	(NO) LAMPS	CROSS BAFFLE	OVERALL NOMINAL FIXTURE LENGTH
SCB-28-ID/D	(1) 4' T5	CCB	4'
SCB-28-ID/D	(2) 4' T5	CCB	4'
SCB-28-ID/D	(3) 4' T5	CCB	4'
SCB-28-ID/D	(2) 4' T5	CCB	8'
SCB-28-ID/D	(4) 4' T5	CCB	8'
SCB-28-ID/D	(6) 4' T5	CCB	8'
SCB-28-ID/D	(1) 4' T5HO	CCB	4'
SCB-28-ID/D	(2) 4' T5HO	CCB	4'
SCB-28-ID/D	(3) 4' T5HO	CCB	4'
SCB-28-ID/D	(2) 4' T5HO	CCB	8'
SCB-28-ID/D	(4) 4' T5HO	CCB	8'
SCB-28-ID/D	(6) 4' T5HO	CCB	8'
SCB-28-ID/D	(2) 4' T8	CCB	4'
SCB-28-ID/D	(4) 4' T8	CCB	8'

FIXTURE VIEW

STANDARD

HOUSING: Constructed of die-formed 18 gauge cold rolled steel.

FINISH: Baked white enamel.

BALLASTS: 120 Volt, 60 Hertz, Class P Electronic Standard.

LAMP SHIELDING: Contoured cross baffle, 2" on center spacing. Baked white enamel finish.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO labels.

OPTIONS:

BALLASTS: 277 Volt, dimming ballasts available.

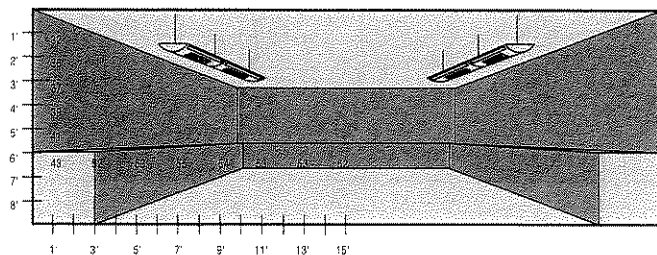
MOUNTING: Pendant - 1/2" dia., 18" long, standard. "P"=Pendent, "AC"=Aircraft cable. If different lengths are required, specify "P" or "AC" and required length. Example: "AC-24."

CROSS BAFFLE OVERLAY: White overlay diffuser, mounted over cross baffle, suffix "WO"

CONTOURED END CAPS: Contoured to fit end of run fixtures. Use suffix "CEC".

FINISH: Custom paint finishes are available. Please supply color chip.

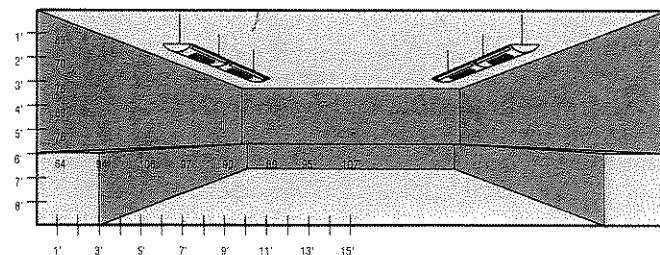
KEY PLAN VIEW



FIXTURE: SCB-28-232T8-18C

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES

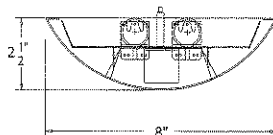
NOTE: VALUES ARE INITIAL ILLUMINANCE



FIXTURE: SCB-28-254-T5-8C

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES

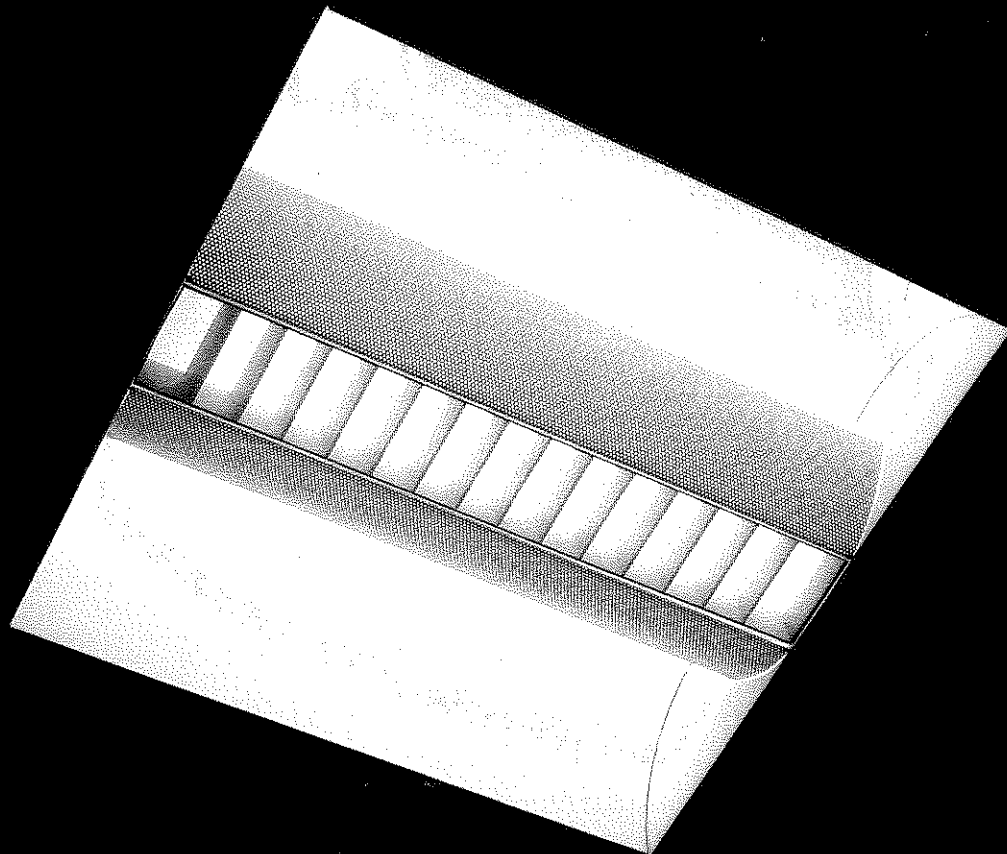
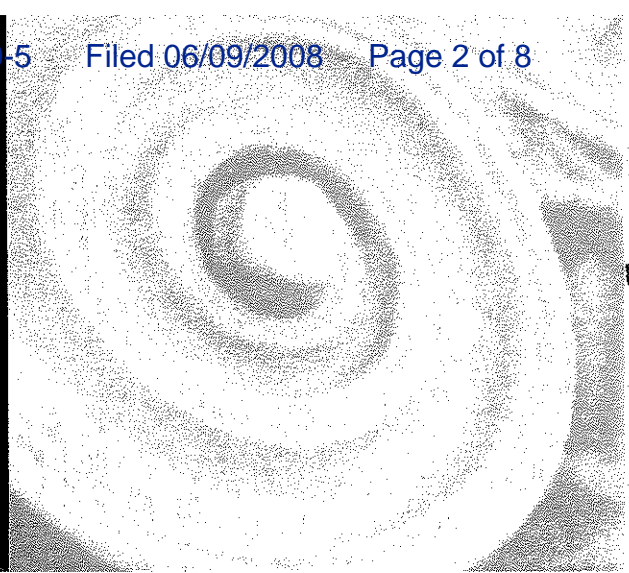
NOTE: VALUES ARE INITIAL ILLUMINANCE



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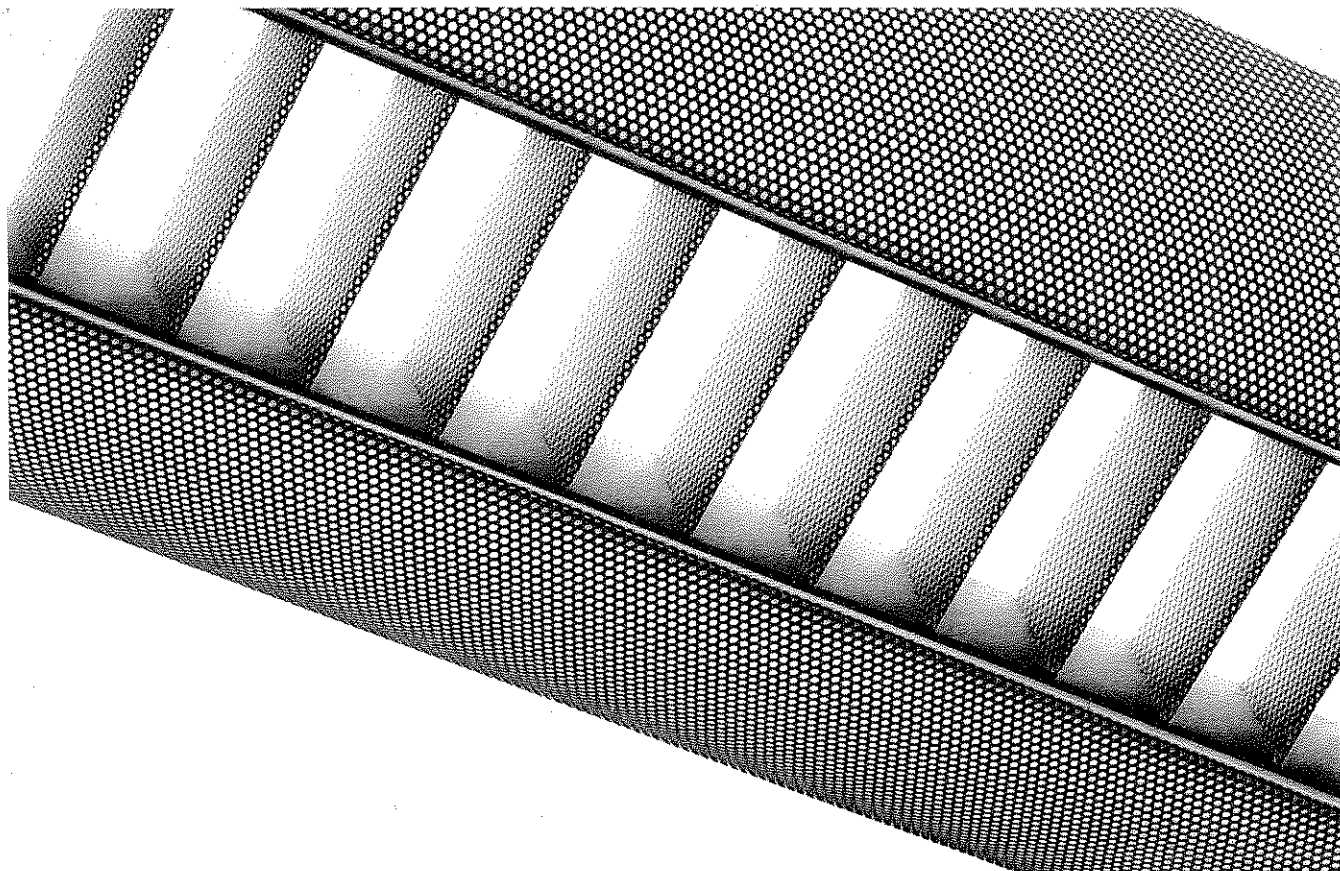
AST-22 CB/PX S E R I E S



INDIRECT/DIRECT RECESSED

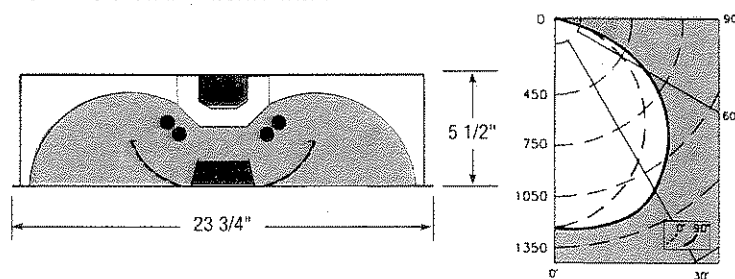
The AST-22/CB/PX is a recessed fixture designed to provide a combination of direct and indirect lighting. A perforated lower conceals the lamp utilized for direct lighting. The reflecting system is computer designed to assure effective glare control. The AST-22/CB/PX is ideal for lobbies, conference rooms and large open areas, where the fixture may be viewed directly and complete lamp shielding is a requirement. Fixtures utilizing biac and T8 lamps are available.

FIXTURE VIEW



FIXTURE PERFORMANCE

AST-22/CB/PX-240BX-PFM

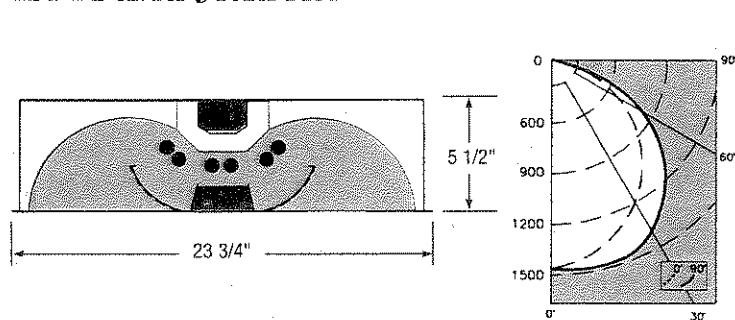


COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20

pCC	.80				.70				.50				.30				.10				0			
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																								
0	60	60	60	60	58	58	58	58	56	56	56	53	53	53	51	51	51	50						
1	55	53	51	49	54	52	50	48	50	48	47	48	47	46	46	45	44	43						
2	51	47	44	41	49	46	43	40	44	42	40	42	40	39	41	39	38	37						
3	46	42	38	35	45	41	37	34	39	36	34	38	35	33	37	34	33	32						
4	43	37	33	30	41	36	32	29	35	32	29	34	31	29	33	30	28	27						
5	39	33	28	25	38	32	28	25	31	27	25	30	27	24	29	26	24	23						
6	36	29	25	22	35	29	25	22	28	24	21	27	24	21	26	23	21	20						
7	33	26	22	19	32	26	22	19	25	21	19	24	21	18	24	21	18	17						
8	30	23	19	16	30	23	19	16	22	19	16	22	18	16	21	18	16	15						
9	28	21	17	14	27	21	17	14	20	16	14	20	16	14	19	16	14	13						
10	26	19	15	12	25	19	15	12	18	15	12	18	15	12	17	14	12	11						

Number of Lamps: 2 Lumens per Lamp: 3150 Ballast Factor: 1.00

AST-24/CB/PX-340BX-PFM



COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20

pCC	.80				.70				.50				.30				.10				0			
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																								
0	47	47	47	47	46	46	46	46	44	44	44	42	42	42	40	40	40	39						
1	43	42	40	39	42	41	39	38	39	38	37	38	37	36	36	35	35	34						
2	40	37	35	32	39	36	34	32	35	33	31	34	32	31	32	31	30	29						
3	37	33	30	28	36	32	30	27	31	29	27	30	28	26	29	27	26	25						
4	34	29	26	24	33	29	26	24	28	25	23	27	25	23	26	24	23	22						
5	31	26	23	20	30	26	23	20	25	22	20	24	22	20	23	21	20	19						
6	28	23	20	18	26	23	20	18	22	20	17	22	19	17	21	19	17	16						
7	26	21	18	15	26	21	18	15	20	17	15	20	17	15	19	17	15	14						
8	24	19	16	13	24	19	16	13	18	15	13	18	15	13	17	15	13	12						
9	22	17	14	12	22	17	14	12	16	14	12	16	13	12	16	13	12	11						
10	21	16	12	10	20	15	12	10	15	12	10	15	12	10	14	12	10	9						

Number of Lamps: 2 Lumens per Lamp: 3150 Ballast Factor: 1.00

SPECIFICATIONS

HOUSING: Constructed of die-formed 20 gauge cold rolled steel.

REFLECTOR: Die-formed from 20 gauge steel, baked white enamel finish. 87% reflectance.

FINISH: Baked white enamel.

BALLASTS: 120 volt, 60 hertz, class P, electronic standard.

LAMP SHIELDING: Fabricated from perforated metal. 74 holes per square inch. Perforations 0.081 dia. holes with white overlay acrylic diffuser.

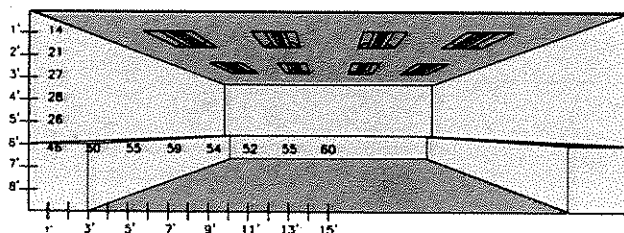
LAMPS: 40 Watt or 50 Watt bi-x (by others)

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

BALLASTS: 277 volt, electronic and dimming ballasts available. Please specify.

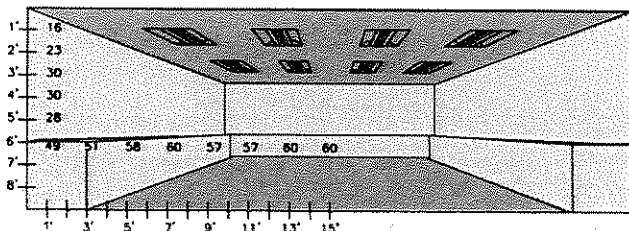
ROOM VIEW



FIXTURE: AST-22/CB/PX-240BX-PFM

ROOM: 30'x20'x8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: Values are initial illuminance. Fixtures are on 8' x 6' Centers



FIXTURE: AST-22/CB/PX-340BX-PFM

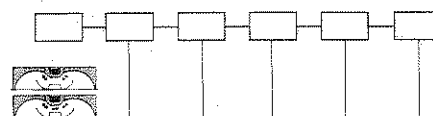
ROOM: 30'x20'x8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: Values are initial illuminance. Fixtures are on 8' x 6' Centers

ORDERING KEY

CATALOG NUMBER

AST/CB-22-340BX-PFM/PX
AST/CB-24-640BX-PFM/PX



NUMBER OF LAMPS

3-3 Lamps
6-6 Lamps

LAMP WATTAGE

40-40BX
50-50BX

LAMP SHIELDING

PFM/PX 0.081 dia holes (74 holes per sq inch)
with matte white overlay and perforated cross blade

CEILING TYPE

T - Exposed T-bar
F - Flanged application

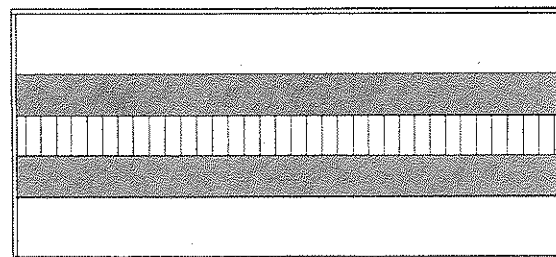
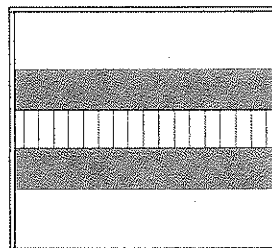
VOLTAGE

120V-120 Volt
277V-277 Volt

NOTE:

2x2 fixtures are available with 3 biax lamps
2x4 fixtures are available with 6 biax lamps

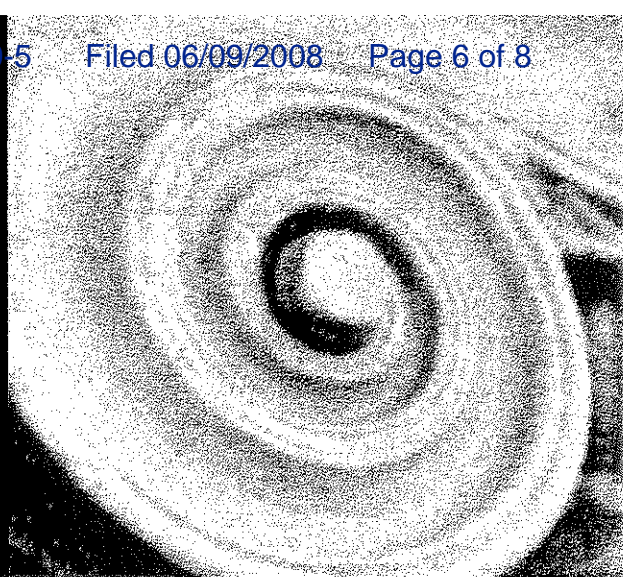
PLAN VIEW



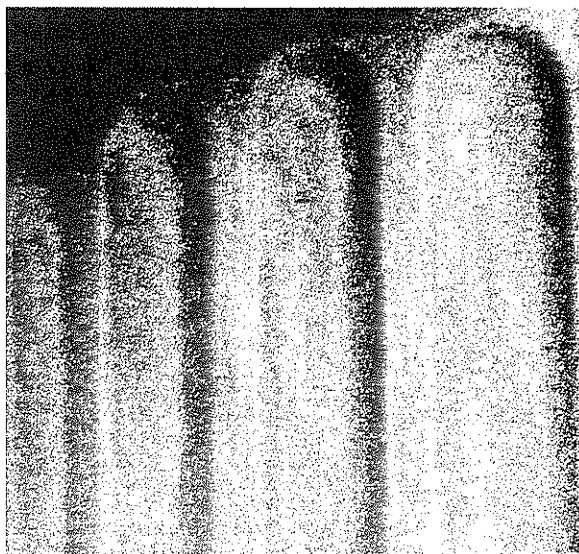
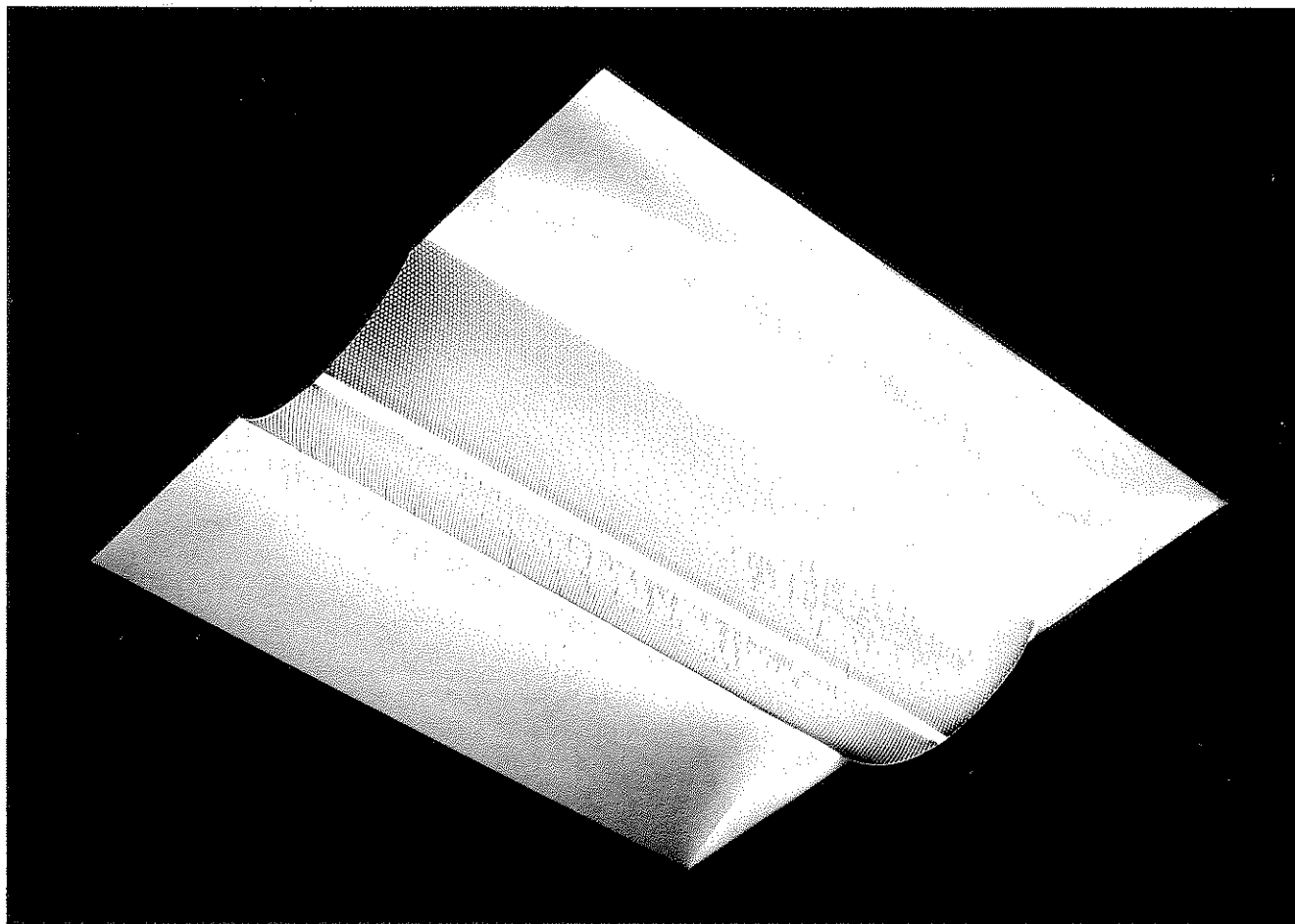
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SR-AST/CB

S E R I E S S

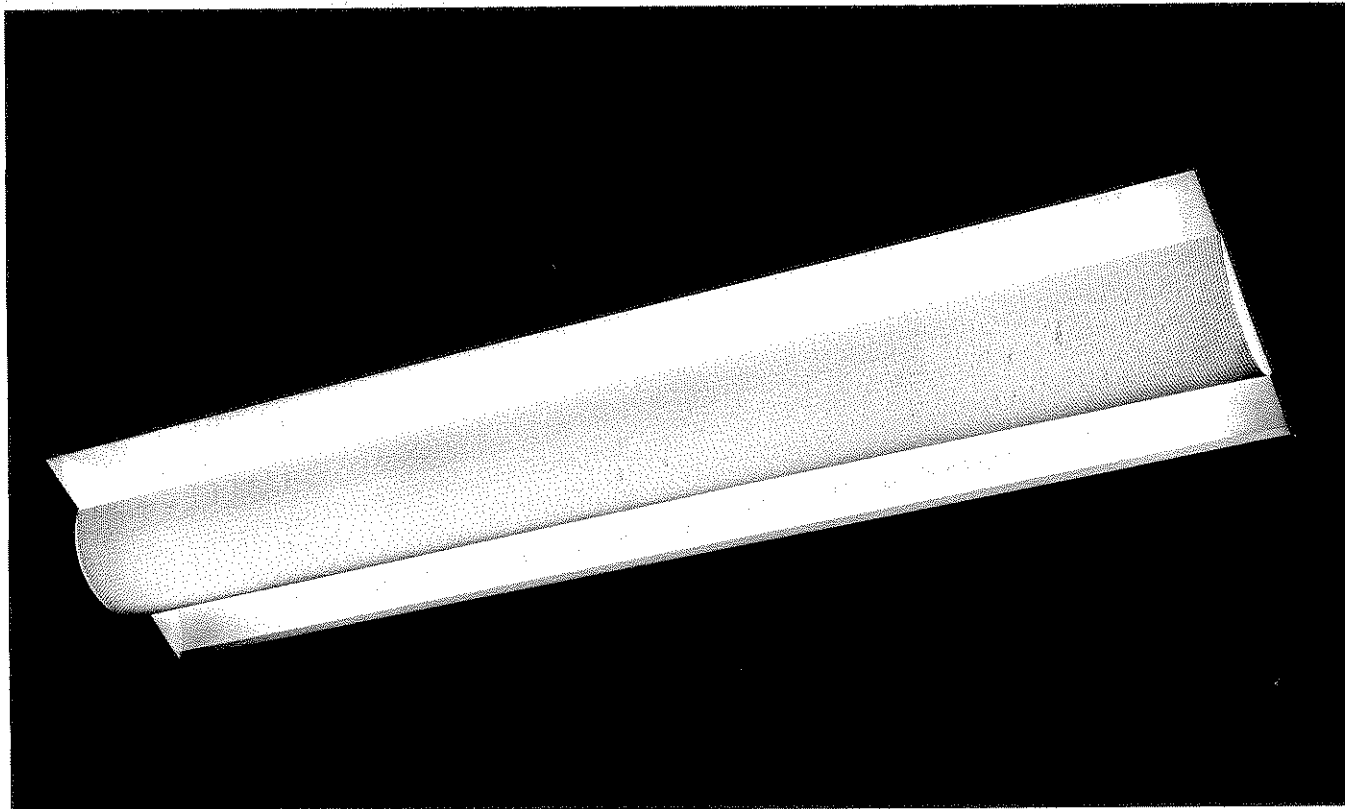


#5

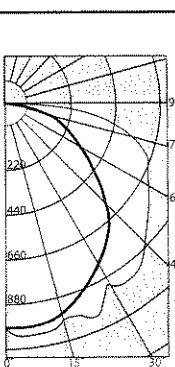


INDIRECT/DIRECT SEMI-RECESSED

The AST semi-recessed series was developed for areas that have limited plenum depth. The recessed portion of the housing is only 2-5/16" deep. The compact optical system distributes light evenly with soft, glare-free illumination. This fixture series is ideal for lobbies, conference rooms and large open areas where fixtures may be viewed directly, and complete lamp shielding is a requirement. Fixtures utilizing Biac, T5 and T5HO lamps are available.

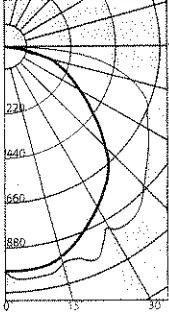


SB 1 Piece Basket Shown

	CANDELA DISTRIBUTION SUMMARY						COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20													ZONAL LUMEN SUMMARY							
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC		.80		.70		.50		.30		.10		0	ZONE	LUMENS	%LAMP	%FIXT			
								RW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	0				
	0°	900	900	900	900	900		RCC															0-30	796	12.6	23.1	
	5°	890	897	898	899	898	85	RW															0-40	1320	21.0	38.4	
	15°	853	863	867	874	877	245	RCC															0-60	2434	38.6	70.7	
	25°	782	796	813	831	835	375	RW															0-90	3433	54.5	99.7	
	35°	680	699	737	770	782	460	RCC															90-180	10	0.2	0.3	
	45°	548	581	644	692	709	492	RW															0-180	3443	54.7	100.0	
	55°	398	454	543	617	644	478	RCC	0	65	65	65	65	63	63	63	63	61	61	61	58	58	58	56	56	56	54
	65°	242	326	453	541	570	427	RW	1	59	56	53	51	57	55	52	50	52	50	49	50	49	47	48	47	46	45
	75°	121	212	347	431	460	337	RCC	2	53	48	44	41	52	47	44	41	45	42	40	43	41	39	42	40	38	36
	85°	36	80	144	171	172	141	RW	3	48	42	38	34	47	42	37	34	40	36	33	38	35	32	37	34	32	31
	90°	0	11	35	60	70		RCC	4	44	37	32	29	43	37	32	28	35	31	28	34	30	28	33	30	27	26
								RW	5	40	33	28	24	39	32	27	24	31	27	23	30	26	23	29	26	23	22
								RCC	6	37	29	24	21	36	29	24	20	28	23	20	27	23	20	26	22	20	19
								RW	7	34	26	21	18	33	26	21	18	25	21	17	24	20	17	23	20	17	16
								RCC	8	31	24	19	15	30	23	18	15	22	18	15	22	18	15	21	17	15	14
								RW	9	29	21	16	13	28	21	16	13	20	16	13	19	16	13	19	15	13	12
								RCC	10	27	19	15	12	26	19	14	11	18	14	11	18	14	11	17	14	11	10
								RW																			



2 - 40W BIAX LAMP

	CANDELA DISTRIBUTION SUMMARY						COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20													ZONAL LUMEN SUMMARY										
	ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80			.70			.50			.30			.10			0	ZONE	LUMENS	%LAMP	%FIX		
								RW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0				
	0°	900	900	900	900	900																				0-30	796	12.6	23.1	
	5°	890	897	898	899	898	85	RCR																		0-40	1320	21.0	38.4	
	15°	853	863	867	874	877	245	0	65	65	65	65	63	63	63	63	61	61	61	58	58	58	56	56	56	54	0-60	2434	38.6	70.7
	25°	782	796	813	831	835	375	1	59	56	53	51	57	55	52	50	52	50	49	50	49	47	48	47	46	45	0-90	3433	54.5	99.7
	35°	680	699	737	770	782	460	2	53	48	44	41	52	47	44	41	45	42	40	43	41	39	42	40	38	36	90-180	10	0.2	0.3
	45°	548	581	644	692	709	492	3	48	42	38	34	47	42	37	34	40	36	33	38	35	32	37	34	32	31	0-180	3443	54.7	100.0
	55°	398	454	543	617	644	478	4	44	37	32	29	43	37	32	28	35	31	28	34	30	28	33	30	27	26				
	65°	242	326	453	541	570	427	5	40	33	28	24	39	32	27	24	31	27	23	30	26	23	29	26	23	22				
	75°	121	212	347	431	460	337	6	37	29	24	21	36	29	24	20	28	23	20	27	23	20	26	22	20	19				
	85°	36	80	144	171	172	141	7	34	26	21	18	33	26	21	18	25	21	17	24	20	17	23	20	17	16				
	90°	0	11	35	60	70		8	31	24	19	15	30	23	18	15	22	18	15	22	18	15	21	17	15	14				
								9	29	21	16	13	28	21	16	13	20	16	13	19	16	13	19	15	13	12				
								10	27	19	15	12	26	19	14	11	18	14	11	18	14	11	17	14	11	10				



4 - 40W BIAX LAMP

STANDARD DATA

HOUSING: To be die-formed from 20 gauge cold rolled steel.

REFLECTOR: To be die-formed from 20 gauge cold rolled steel, baked white enamel finish, with 89% reflectance.

BALLAST: 120 Volt, 60 Hertz, Class P, Electronic standard.

LAMP SHIELDING: Fabricated from perforated metal. 74 holes per square inch. Perforations 0.081 diameter with white overlay acrylic diffuser.

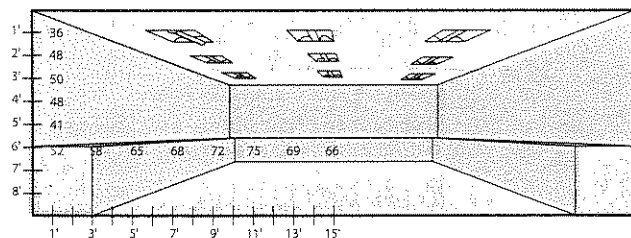
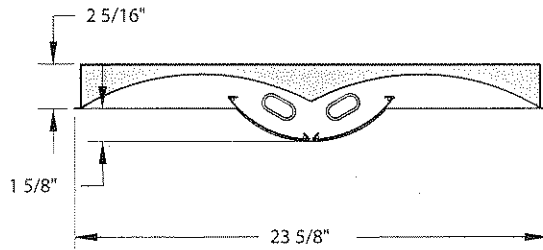
LAMPS: Biax, T5, T5HO By others.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

BALLASTS: 277 Volt, dimming ballasts available. Please specify.

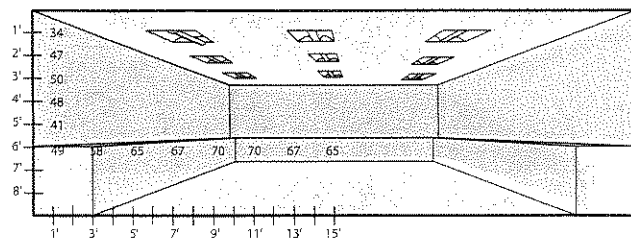
STANDARD DATA



FIXTURE: SR-AST-CB-22-240-BX-PFM, 6' X 6' ON CENTER

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: VALUES ARE INITIAL ILLUMINANCE.



FIXTURE: SR-AST-CB-24-440-BX-PFM, 8' X 8' ON CENTER

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: VALUES ARE INITIAL ILLUMINANCE.

ORDERING KEY

SR-AST/CB

CATALOG NUMBER

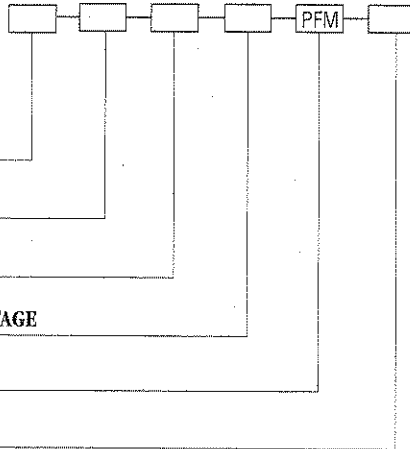
SIZE OF FIXTURE

NUMBER OF LAMPS

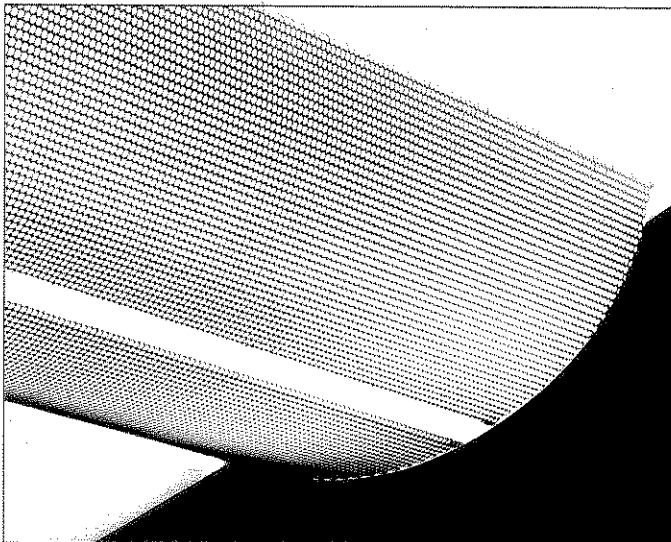
TYPE OF LAMPS AND WATTAGE

PERFORATED METAL

VOLTAGE - 120V OR 277V



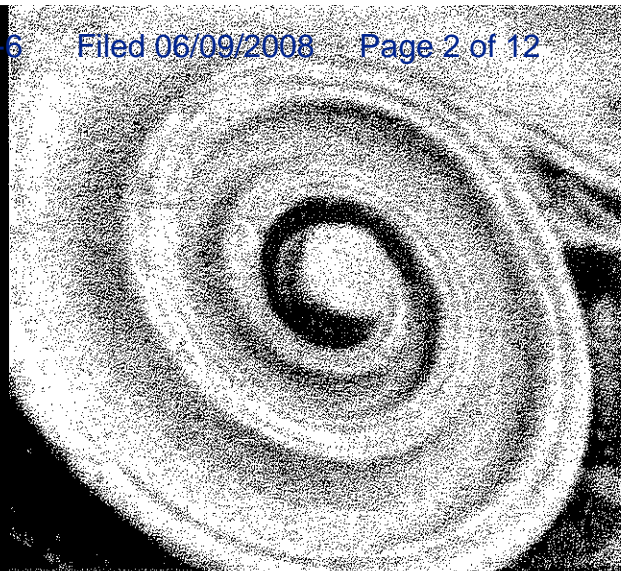
CATALOG NUMBER	FIXTURE		PFM	VOLTAGE
	SIZE	(NO.) LAMPS		
SR-AST/CB	2X2	(2) 40 Blax	PFM	
SR-AST/CB	2X2	(2) 50 Blax	PFM	
SR-AST/CB	2X2	(2) T5 (14W)	PFM	
SR-AST/CB	2X2	(2) T5HO (24W)	PFM	
SR-AST/CB	2X4	(2) 40 Blax	PFM	
SR-AST/CB	2X4	(2) 50 Blax	PFM	
SR-AST/CB	2X4	(2) T5 (28W)	PFM	
SR-AST/CB	2X4	(2) T5HO (54W)	PFM	
SR-AST/CB	1X4	(2) 40 Blax	PFM	
SR-AST/CB	1X4	(2) 50 Blax	PFM	
SR-AST/CB	1X4	(2) T5 (28W)	PFM	
SR-AST/CB	1X4	(2) T5HO (54W)	PFM	



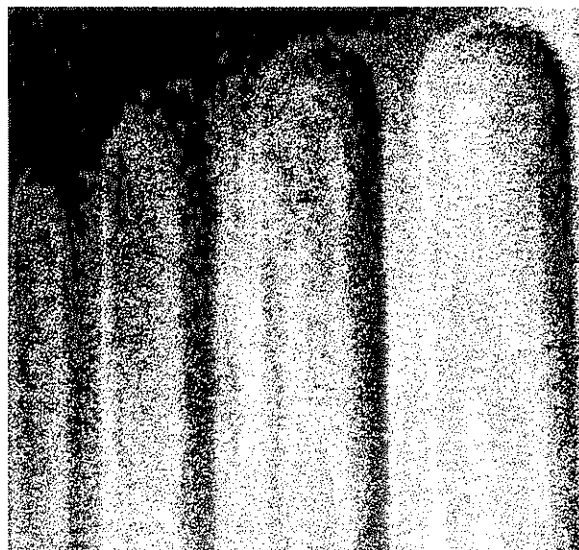
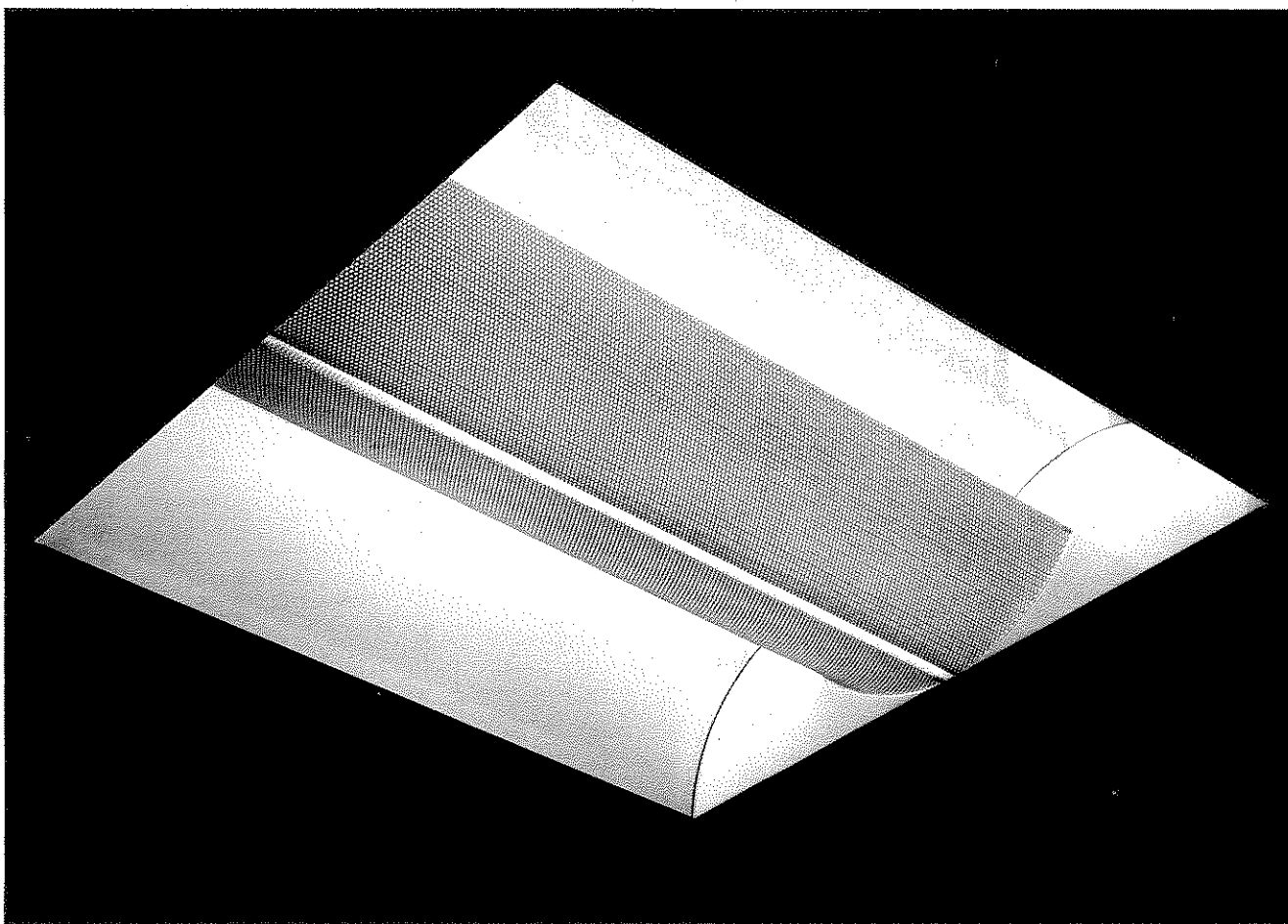
National Lighting Company, Inc. 522 Cortlandt Street, Belleville, New Jersey 07109
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AST/CB

S E R I E S



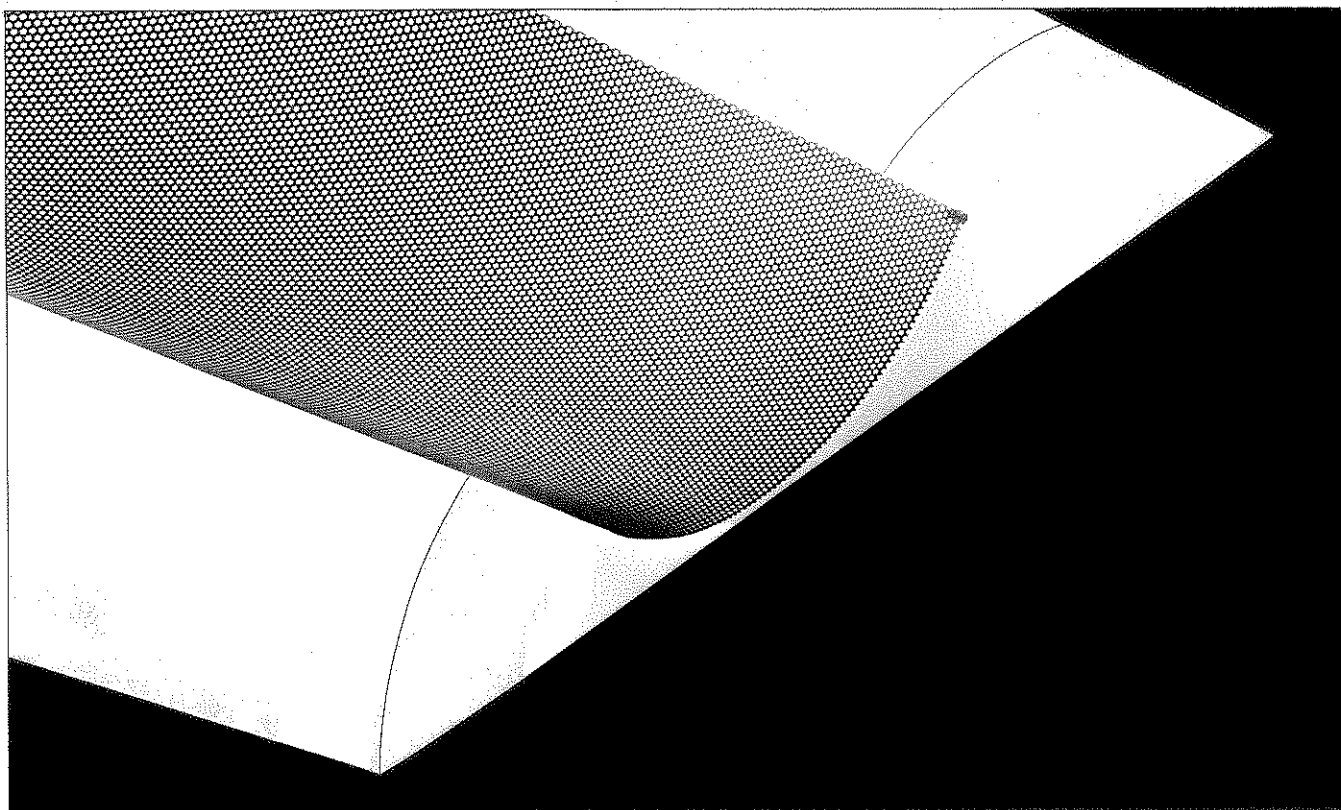
#6



INDIRECT/DIRECT RECESSED

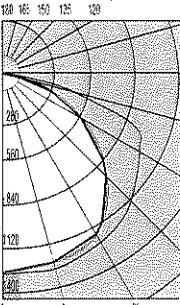
The AST/CB is a recessed fixture designed to create an indirect lighting environment. The reflecting system is computer designed to assure effective glare control. The AST/CB is ideal for lobbies, conference rooms and large open areas where the fixture may be viewed directly, and complete lamp shielding is a requirement. Fixtures utilizing biacx and T5 lamps are available.

PIECE VIEW



SB 1 Piece Diffuser Shown

DIFFUSER PERFORMANCE

CANDELA DISTRIBUTION SUMMARY							COEFFICIENT OF UTILIZATION - Zonal Cavity Method: ptc = 0.20												ZONAL LUMEN SUMMARY										
ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80			.70			.50			.30			.10			0	ZONE	LUMENS %	LAMP %	FIXT		
							RW	.7	.5	.3	.7	.5	.3	.5	.3	.1	.5	.3	.1	.5	.3	.1	0	0-30	1057	16.8	23.7		
							RCR																	0-40	1757	27.9	39.4		
	0°	1337	1337	1337	1337	1337	0	84	84	84	84	82	82	82	82	79	79	79	75	75	75	72	72	72	71	0-60	3284	52.1	73.6
	5°	1328	1332	1333	1334	1334	1	77	74	71	68	75	72	69	67	65	66	65	63	64	62	61	59	59	0-90	4464	70.9	100.0	
	15°	1284	1291	1297	1301	1304	2	70	64	59	55	68	63	58	54	60	56	53	58	55	52	56	49	49	90-180	0	0.0	0.0	
	25°	1196	1207	1222	1237	1244	3	64	56	50	46	62	55	50	45	53	48	44	51	47	44	49	41	41	0-180	1057	16.8	23.7	
	35°	1065	1083	1115	1153	1171	4	58	50	43	38	56	49	43	38	47	42	38	45	41	37	44	35	35					
	45°	897	922	988	1056	1085	5	53	43	37	32	51	43	36	32	41	36	31	40	35	31	38	34	31	29				
	55°	693	736	843	964	1020	6	48	39	32	27	47	38	32	27	37	31	27	35	30	27	34	30	26	25				
	65°	458	532	699	864	930	7	44	35	28	24	43	34	28	23	33	27	23	32	27	23	31	26	23	21				
	75°	236	317	465	448	422	8	41	31	25	20	40	30	24	20	29	24	20	28	24	20	28	23	20	18				
	85°	51	58	72	77	81	9	38	28	21	17	37	27	21	17	26	21	17	26	21	17	25	20	17	16				
	90°	0	0	0	0	0	10	35	25	19	15	34	25	19	15	24	19	15	23	18	15	23	18	15	14				
																								</					

AST/CB 240 BIAx

NATIONAL**CATALOG NUMBER**

AST/CB 2x2

AST/CB 2x4

AST/CB 1x4

**NUMBER OF LAMPS**

2 - 2 LAMPS

3 - 3 LAMPS

4 - 4 LAMPS

6 - 6 LAMPS

LAMP WATTAGES

40 BX-40 WATT BIAx

50 BX-50 WATT BIAx

28 T5-28 WATT (4')

LAMP SHIELDINGPFM - 0.081 DIA HOLES (74 HOLES PER SQ. IN.)
WITH WHITE UNDERLAY DIFFUSER**CEILING TAPE**

T-EXPOSED T-BAR

F-FLANGED APPLICATION

VOLTAGE - 120V OR 277V

120V-120 VOLT

277V-277 VOLT

NOTE:

2'X2' FIXTURES ARE AVAILABLE WITH 2 OR 3 BIAx LAMPS

2'X4' FIXTURES ARE AVAILABLE WITH 4 OR 6 BIAx LAMPS OR 2 OR 3 T5 LAMPS

1'X4' FIXTURES ARE AVAILABLE WITH 2 OR 4 BIAx LAMPS OR 2 OR 3 T5 LAMPS



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BRIDGING KIT

CATALOG NUMBER

AST/CB 2x2

AST/CB 2x4

AST/CB 1x4



NUMBER OF LAMPS

2 - 2 LAMPS

3 - 3 LAMPS

4 - 4 LAMPS

6 - 6 LAMPS

LAMP WATTAGES

40 BX-40 WATT BIAx

50 BX-50 WATT BIAx

28 T5-28 WATT (4')

LAMP SHIELDING

PFM - 0.081 DIA HOLES (74 HOLES PER SQ. IN.)
WITH WHITE UNDERLAY DIFFUSER

CEILING TAPE

T-EXPOSED T-BAR

F-FLANGED APPLICATION

VOLTAGE - 120V OR 277V

120V-120 VOLT

277V-277 VOLT

NOTE:

2'X2' FIXTURES ARE AVAILABLE WITH 2 OR 3 BIAx LAMPS

2'X4' FIXTURES ARE AVAILABLE WITH 4 OR 6 BIAx LAMPS OR 2 OR 3 T5 LAMPS

1'X4' FIXTURES ARE AVAILABLE WITH 2 OR 4 BIAx LAMPS OR 2 OR 3 T5 LAMPS



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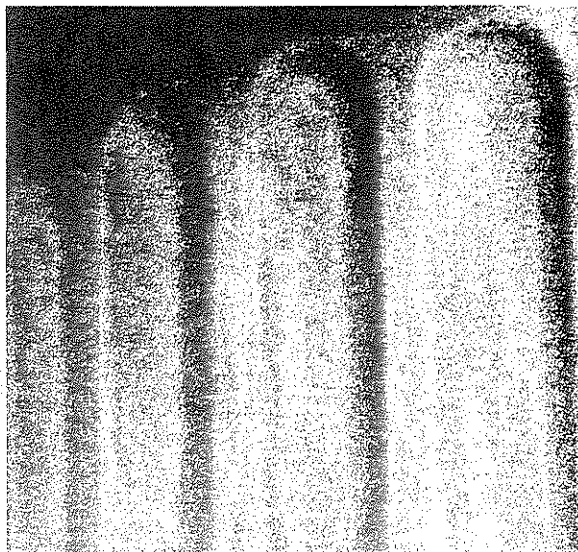
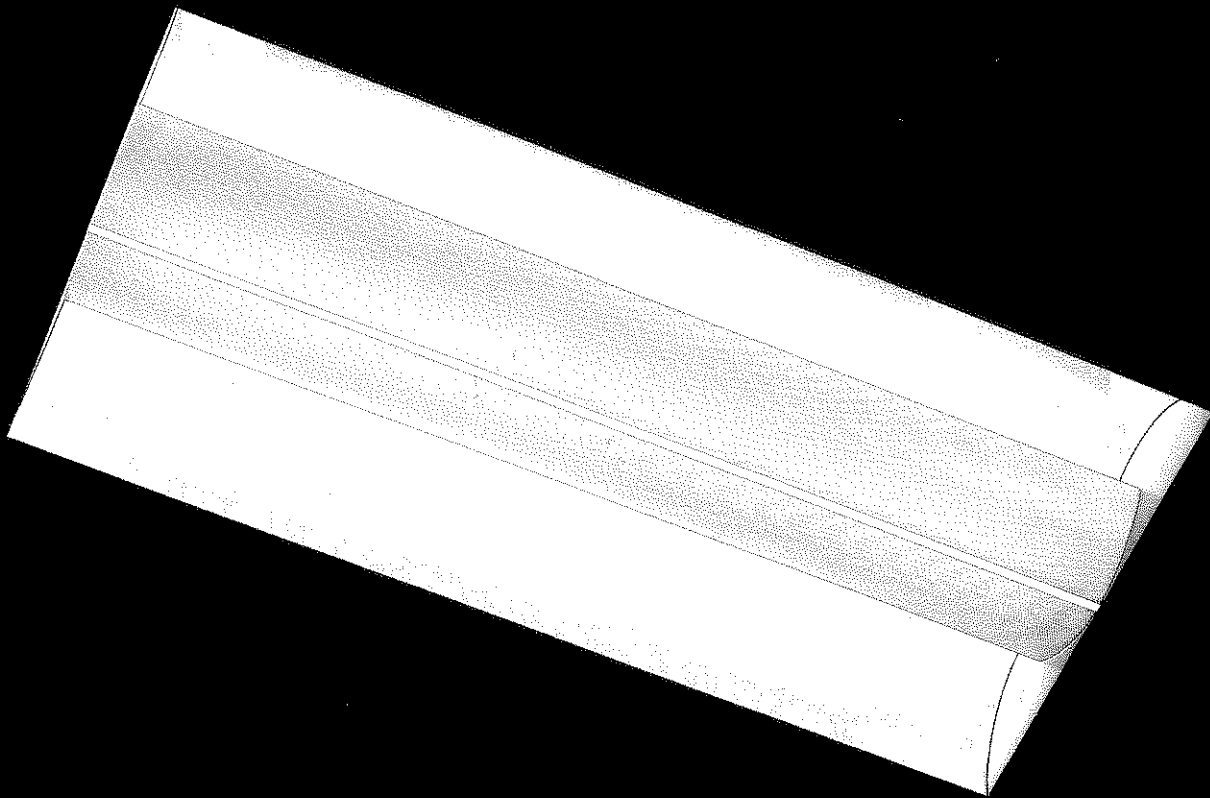
www.natlgtg.com

AST/CB-24

S E R I E S

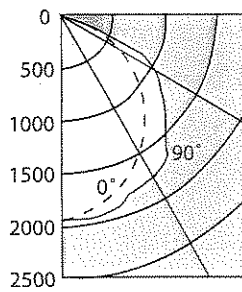
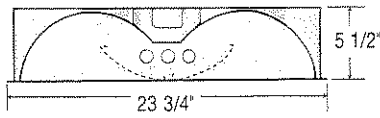


#6



INDIRECT/DIRECT RECESSED

The AST/CB-24 is a recessed fixture designed to provide a direct/indirect lighting environment. The reflecting system is computer designed to assure effective glare control. The AST/CB-24 is ideal for lobbies, conference rooms and large open areas where the fixture may be viewed directly and complete lamp shielding is a requirement. Fixtures utilizing biac and T8 lamps are available.

AST/CB-24-332-PFM**COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20**

pCC	.80				.70				.50				.30				.10				0			
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																								
0	74	74	74	74	73	73	73	73	69	69	69	66	66	66	64	64	64	62	62	62	62	62	62	62
1	69	66	64	61	67	65	62	60	62	60	59	60	58	57	57	56	55	54	54	54	54	54	54	54
2	63	58	54	51	61	57	54	50	55	52	49	53	50	48	51	49	47	46	46	46	46	46	46	46
3	58	52	47	43	56	51	46	43	49	45	42	47	44	41	46	43	41	39	39	39	39	39	39	39
4	53	46	41	37	52	45	40	37	44	39	36	42	39	36	41	38	35	34	34	34	34	34	34	34
5	48	41	35	31	47	40	35	31	39	34	31	37	34	30	36	33	30	29	29	29	29	29	29	29
6	45	36	31	27	43	36	31	27	35	30	27	34	30	26	33	29	26	25	25	25	25	25	25	25
7	41	33	27	24	40	32	27	23	31	27	23	30	26	23	30	26	23	22	22	22	22	22	22	22
8	38	29	24	20	37	29	24	20	28	23	20	27	23	20	27	23	20	19	19	19	19	19	19	19
9	35	26	21	18	34	26	21	18	25	21	17	25	20	17	24	20	17	16	16	16	16	16	16	16
10	32	24	19	16	32	24	19	15	23	18	15	22	18	15	22	18	15	14	14	14	14	14	14	14

Number of Lamps: 2 Lumens per Lamp: 3150 Ballast Factor: 1.00

CATALOG NUMBER

AST/CB-24

NUMBER OF LAMPS

1-1 Lamps
2-2 Lamps
3-3 Lamps
4-4 Lamps

LAMP WATTAGE

320CT-32 WATT (4ft.) OCTRON
40BX-40 WATT BIAx
50BX-50 WATT BIAx

LAMP SHIELDING

PFM-0.081 dia holes (74 holes per sq. in.)
with matte white overlay

CEILING TYPE

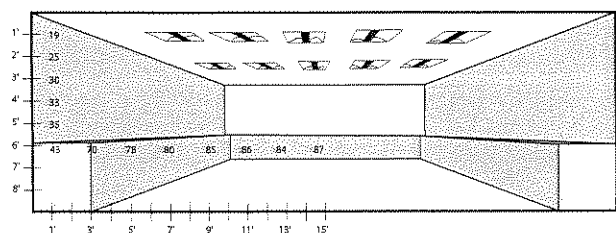
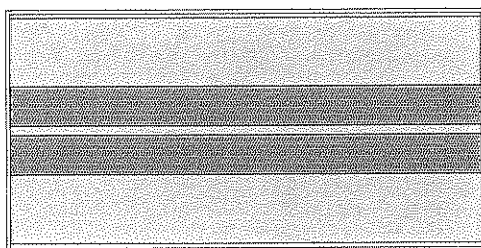
T - Exposed T-bar
F - Flanged Application

VOLTAGE

120V-120 Volt
277V-277 Volt

NOTE:

2x4 fixtures are available with 2, 4, or 6 BIAx lamps or 1, 2, or 3 T8 lamps.

HOUSING: Constructed of die-formed 20 gauge cold rolled steel.**REFLECTOR:** To be die-formed from 20 gauge steel, baked white enamel finish. 89% reflectance.**FINISH:** Baked white enamel**LAMPS:** T8 and BIAx, by others.**BALLASTS:** 120 Volt, 60 Hertz, Class P, electronic standard.**LAMP SHIELDING:** Fabricated from perforated metal .74 holes per sq. inch.**LABELING:** Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.**OPTIONS:****BALLASTS:** 277 Volt, and dimming ballasts available, Please specify.**FIXTURE:** AST/CB-24-332-T8-PFM**ROOM:** 30'x20'x8'-6" with 80-50-20 reflectances. Fixtures are on 8'x6' centers.**NOTE:** Values are initial illuminance.

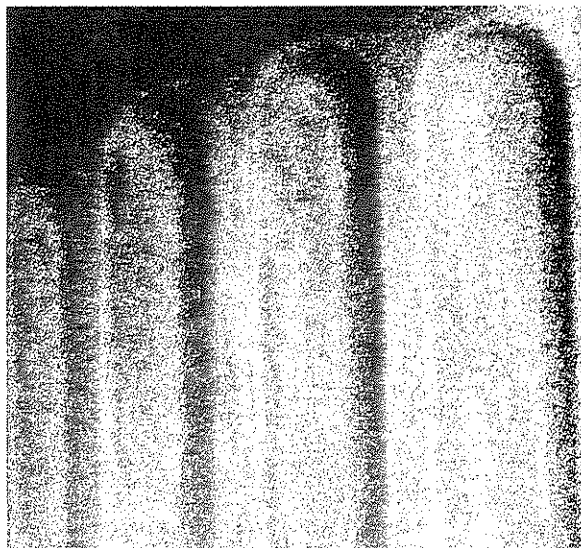
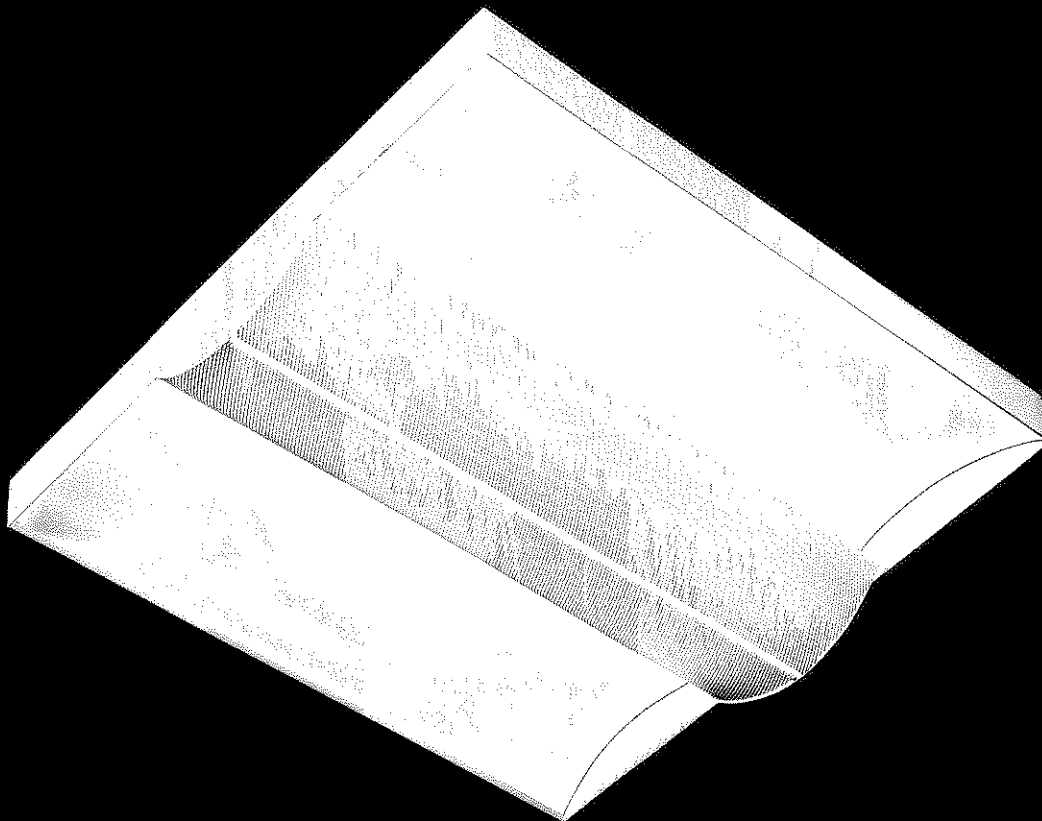
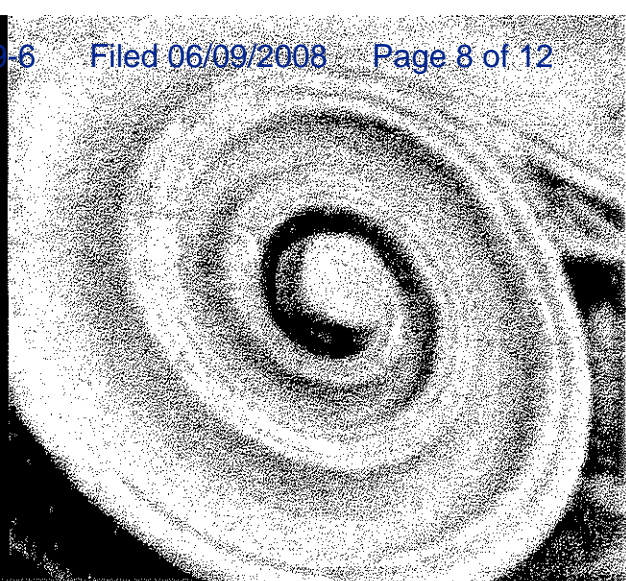
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www.nathg.com

SF-AST/CB

S E R I E S



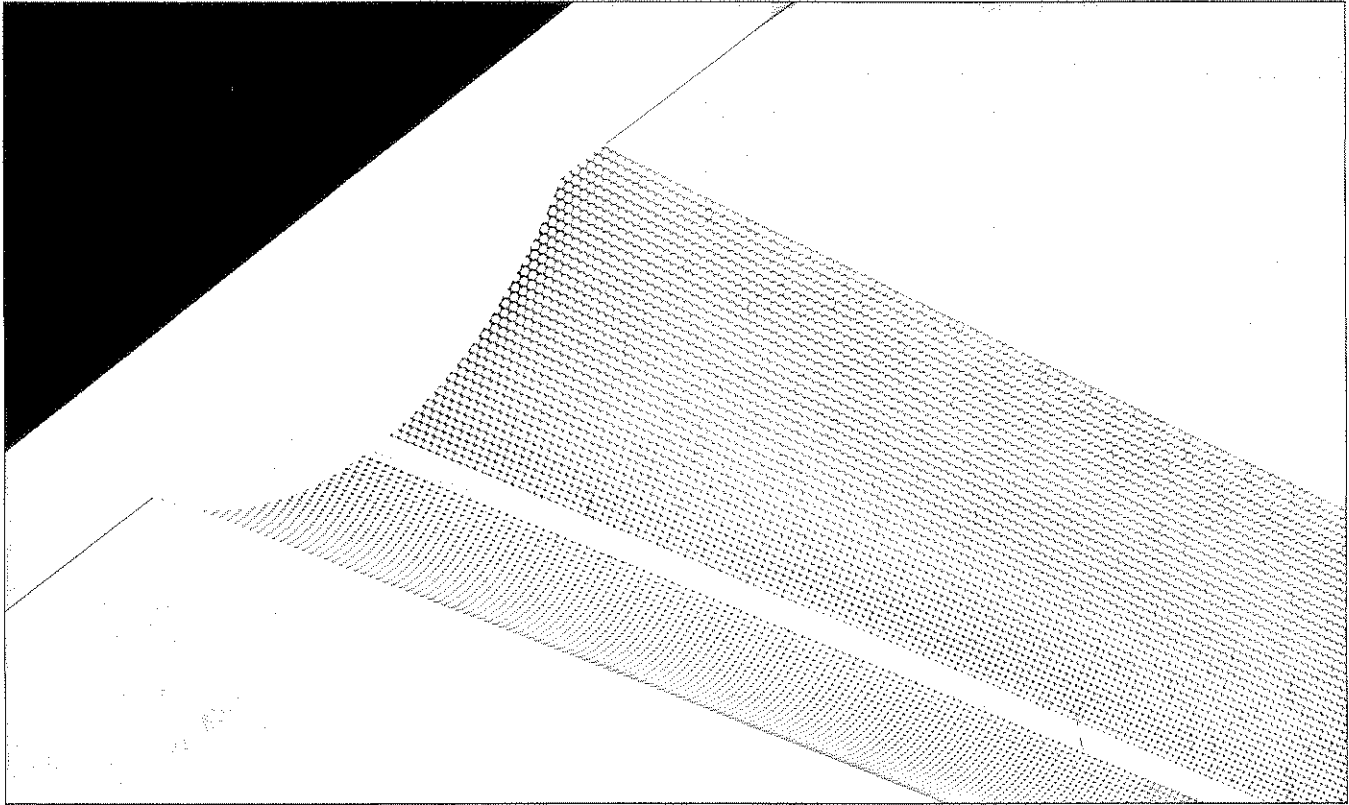
INDIRECT/DIRECT SURFACE

The AST surface mounted series is designed for spaces that require shallow surface mounted fixtures with wide lighting distribution. This fixture series is only 3-15/16" deep.

The SF-AST/CB is designed for applications where access is not available for a recessed fixture, and the appearance of a recessed AST/CB is required.

The SF-AST/CB is designed for large open areas, where fixtures can be viewed directly and complete lamp shielding is required. Fixtures utilizing Blax, T5 and T5HO lamps are available.

DEVELOPING VIEW



COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20

CANDELA DISTRIBUTION SUMMARY							COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20											ZONAL LUMEN SUMMARY			
ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80	.70	.50	.30	.10	0	ZONE LUMENS %LAMP %FIXT							
0°	900	900	900	900	900		RW	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	0-30	796	12.6	23.1
5°	890	897	898	899	898	85	0	65	65	65	65	63	63	63	61	61	61	0-40	1320	21.0	38.4
15°	853	863	867	874	877	245	1	59	56	53	51	57	55	52	50	49	47	0-60	2434	38.6	70.7
25°	782	796	813	831	835	375	2	53	48	44	41	52	47	44	41	45	42	0-90	3433	54.5	99.7
35°	680	699	737	770	782	460	3	48	42	38	34	47	42	37	34	40	36	90-180	10	0.2	0.3
45°	548	581	644	692	709	492	4	44	37	32	29	43	37	32	28	35	31	0-180	3443	54.7	100.0
55°	398	454	543	617	644	478	5	40	33	28	24	39	32	27	24	31	27				
65°	242	326	453	541	570	427	6	37	29	24	21	36	29	24	20	28	23				
75°	121	212	347	431	460	337	7	34	26	21	18	33	26	21	18	25	21				
85°	36	80	144	171	172	141	8	31	24	19	15	30	23	18	15	22	18				
90°	0	11	35	60	70		9	29	21	16	13	28	21	16	13	20	16				
							10	27	19	15	12	26	19	14	11	18	14				



2 - 40W BIAX LAMP

CANDELA DISTRIBUTION SUMMARY							COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pfc = 0.20											ZONAL LUMEN SUMMARY			
ANGLE	0.0	22.5	45.0	67.5	90.0	FLUX	RCC	.80	.70	.50	.30	.10	0	ZONE LUMENS %LAMP %FIXT							
0°	900	900	900	900	900		RW	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	0-30	796	12.6	23.1
5°	890	897	898	899	898	85	0	65	65	65	65	63	63	63	61	61	61	0-40	1320	21.0	38.4
15°	853	863	867	874	877	245	1	59	56	53	51	57	55	52	50	49	47	0-60	2434	38.6	70.7
25°	782	796	813	831	835	375	2	53	48	44	41	52	47	44	41	45	42	0-90	3433	54.5	99.7
35°	680	699	737	770	782	460	3	48	42	38	34	47	42	37	34	40	36	90-180	10	0.2	0.3
45°	548	581	644	692	709	492	4	44	37	32	29	43	37	32	28	35	31	0-180	3443	54.7	100.0
55°	398	454	543	617	644	478	5	40	33	28	24	39	32	27	24	31	27				
65°	242	326	453	541	570	427	6	37	29	24	21	36	29	24	20	28	23				
75°	121	212	347	431	460	337	7	34	26	21	18	33	26	21	18	25	21				
85°	36	80	144	171	172	141	8	31	24	19	15	30	23	18	15	22	18				
90°	0	11	35	60	70		9	29	21	16	13	28	21	16	13	20	16				
							10	27	19	15	12	26	19	14	11	18	14				



4 - 40W BIAX LAMP

TECHNICAL SPECIFICATIONS

HOUSING: To be die-formed from 20 gauge cold rolled steel.

REFLECTOR: To be die-formed from 20 gauge cold rolled steel, baked white enamel finish, with 89% reflectance.

BALLAST: 120 Volt, 60 Hertz, Class P, Electronic standard.

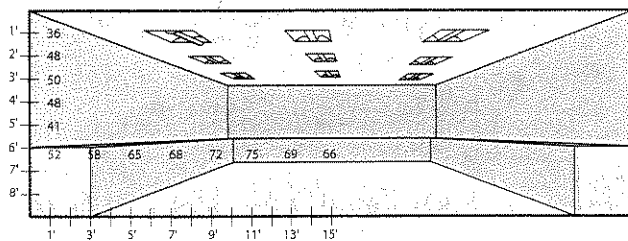
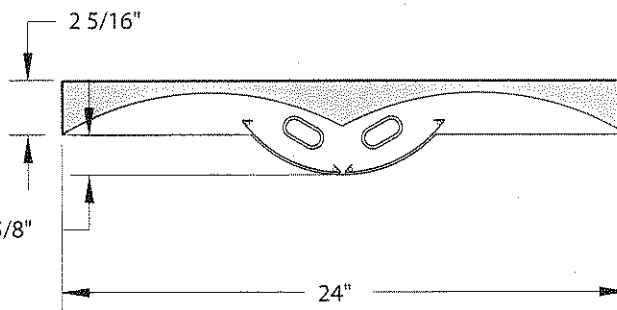
LAMP SHIELDING: Fabricated from perforated metal, 74 holes per square inch. Perforations 0.081 diameter with white overlay acrylic diffuser.

LAMPS: Biax, T5, T5HO by others.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

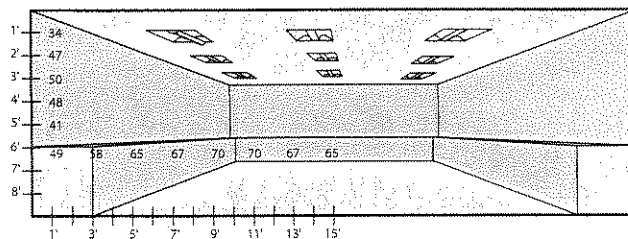
BALLASTS: 277 Volt, dimming ballasts available. Please specify.



FIXTURE: SF-AST-CB-24-440-BX-PFM, 6' X 8' ON CENTER

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES.


NOTE: VALUES ARE INITIAL ILLUMINANCE.



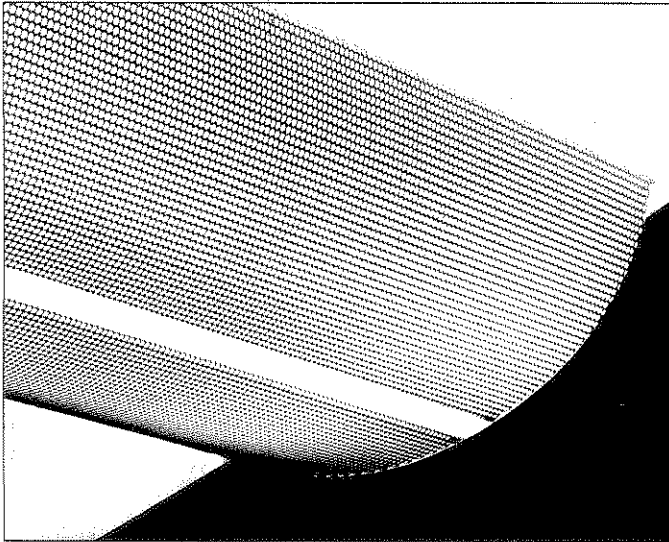
FIXTURE: SF-AST-CB-22-240-BX-PFM, 6' X 6' ON CENTER

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: VALUES ARE INITIAL ILLUMINANCE.

ORDERING KEY
 SF-AST/CB
**CATALOG NUMBER****SIZE OF FIXTURE****NUMBER OF LAMPS****TYPE OF LAMPS AND WATTAGE****PERFORATED METAL****VOLTAGE - 120V OR 277V**

CATALOG NUMBER	FIXTURE		PFM	VOLTAGE
	SIZE	(NO.) LAMPS		
SF-AST/CB	2X2	(2) 40 Blax	PFM	
SF-AST/CB	2X2	(2) 50 Blax	PFM	
SF-AST/CB	2X2	(2) T5 (14W)	PFM	
SF-AST-CB	2X2	(2) T5HO (24W)	PFM	
SF-AST/CB	2X4	(4) 40 Blax	PFM	
SF-AST/CB	2X4	(4) 50 Blax	PFM	
SF-AST/CB	2X4	(2) T5 (28W)	PFM	
SF-AST/CB	2X4	(2) T5HO (54W)	PFM	
SF-AST/CB	1X4	(2) 40 Blax	PFM	
SF-AST/CB	1X4	(2) 50 Blax	PFM	
SF-AST/CB	1X4	(2) T5 (28W)	PFM	
SF-AST/CB	1X4	(2) T5HO (54W)	PFM	



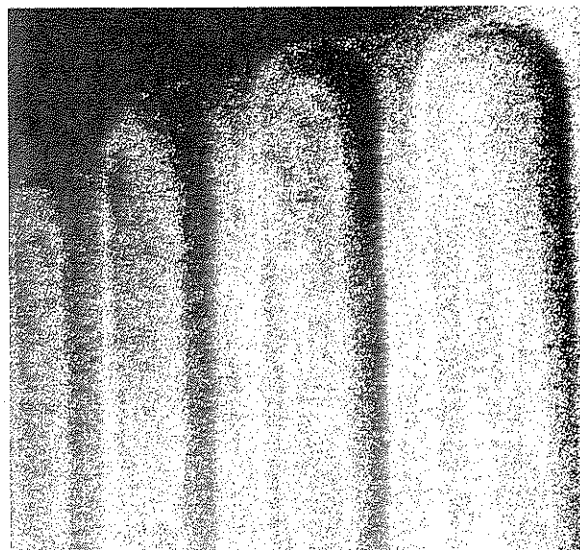
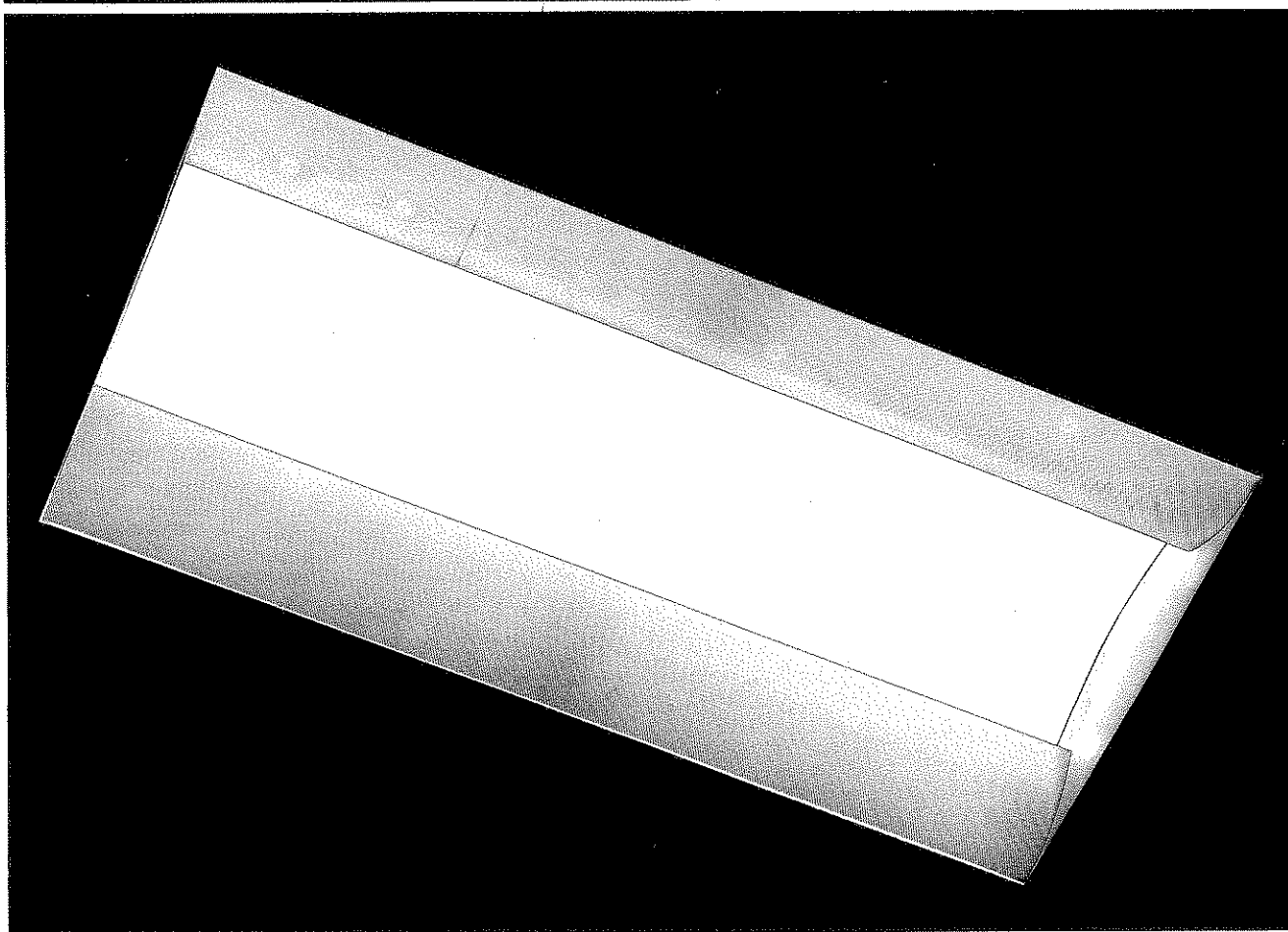
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AST/24

S E R I E S

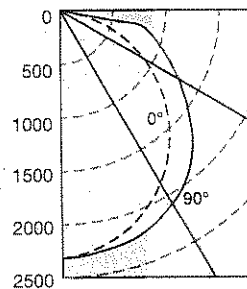
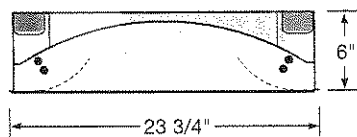


#8



INDIRECT/DIRECT RECESSED

The AST/24 is designed to provide a direct/indirect lighting environment. The reflecting system is computer designed to assure effective glare control. The AST/24 is ideal for lobbies, conference rooms, corridors, executive offices and spaces where the fixture may be viewed directly.

AST/CB-24-240-BX**COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20**

pCC	.80	.70	.50	.30	.10	0
pW	.7 .5 .3 .1	.7 .5 .3 .1	.5 .3 .1	.5 .3 .1	.5 .3 .1	0
RCR						
0	63 63 63 63	62 62 62 62	59 59 59	57 57 57	54 54 54	53
1	58 56 53 51	57 54 52 50	52 50 49	50 49 47	48 47 46	45
2	53 49 45 42	51 47 44 41	46 43 40	44 42 39	42 40 39	37
3	48 43 39 35	47 42 38 35	40 37 34	39 36 34	38 35 33	32
4	44 38 33 30	43 37 33 30	36 32 29	35 31 29	34 31 28	27
5	40 34 29 25	39 33 28 25	32 28 25	31 27 25	30 27 24	23
6	37 30 25 22	36 30 25 22	29 25 22	28 24 21	27 24 21	20
7	34 27 22 19	33 27 22 19	26 22 19	25 21 19	24 21 19	17
8	32 24 20 17	31 24 20 16	23 19 16	23 19 16	22 19 16	15
9	29 22 17 14	28 22 17 14	21 17 14	20 17 14	20 16 14	13
10	27 20 16 13	26 20 15 13	19 15 13	19 15 12	18 15 12	11

Number of Lamps: 2 Lumens per Lamp: 4000 Ballast Factor: 1.00
Independent Luminaire Testing Laboratory Report Number: 04217

CATALOG NUMBER

AST/24

NUMBER OF LAMPS

2-2 Lamps
4-4 Lamps

LAMP WATTAGE

32/OCT-32WATT (4FT) OCTRON
40BX-40WATT BIAx
50BX-50WATT BIAx

LAMP SHIELDING

PFM - 0.081 dia holes (74 holes per sq inch)
with matte white overlay

CEILING TYPE

T - Exposed T-bar
F - Flanged Application

VOLTAGE

120V-120 Volt
277V-277 Volt

NOTE:

2x4 fixtures are available with 2 or 4 biax lamps
or 2 or 4 T8 lamps.

HOUSING: Constructed of die-formed cold rolled steel.

REFLECTOR: To be die-formed from 20 gauge steel, baked white enamel

finish. 89% reflectance.

FINISH: Baked white enamel

LAMPS: T8 and Biax, by others.

BALLASTS: 120 Volt, 60 Hertz, Class P, electronic standard.

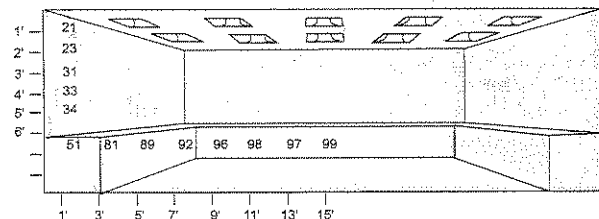
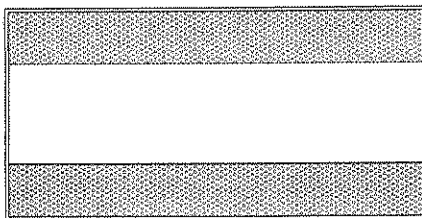
LAMP SHIELDING: Fabricated from perforated metal. 74 holes per sq. inch.

Perforations .081 dia holes with white acrylic overlay diffuser

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

BALLASTS: 277 Volt, and dimming ballasts available, Please specify.



FIXTURE: AST24-4-40BX-PFM

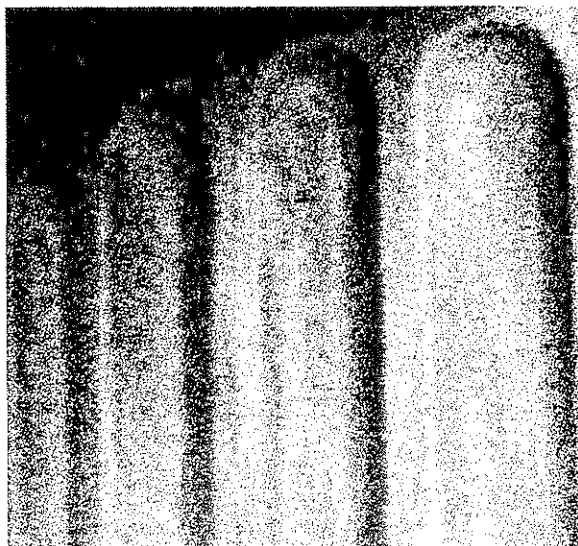
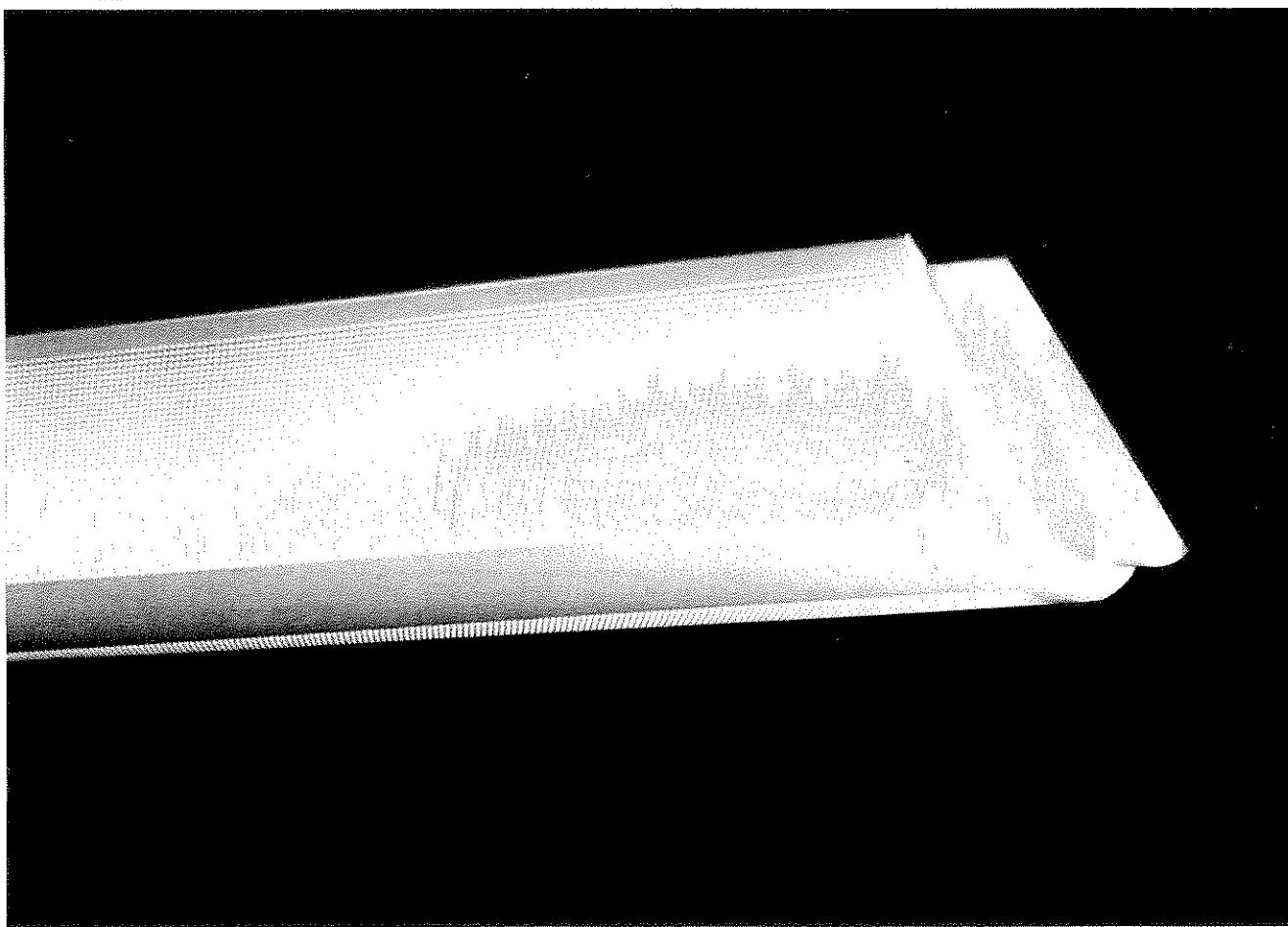
ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCES.

NOTE: Values are initial illuminance. Fixtures are on 8' x 6' centers



JDA

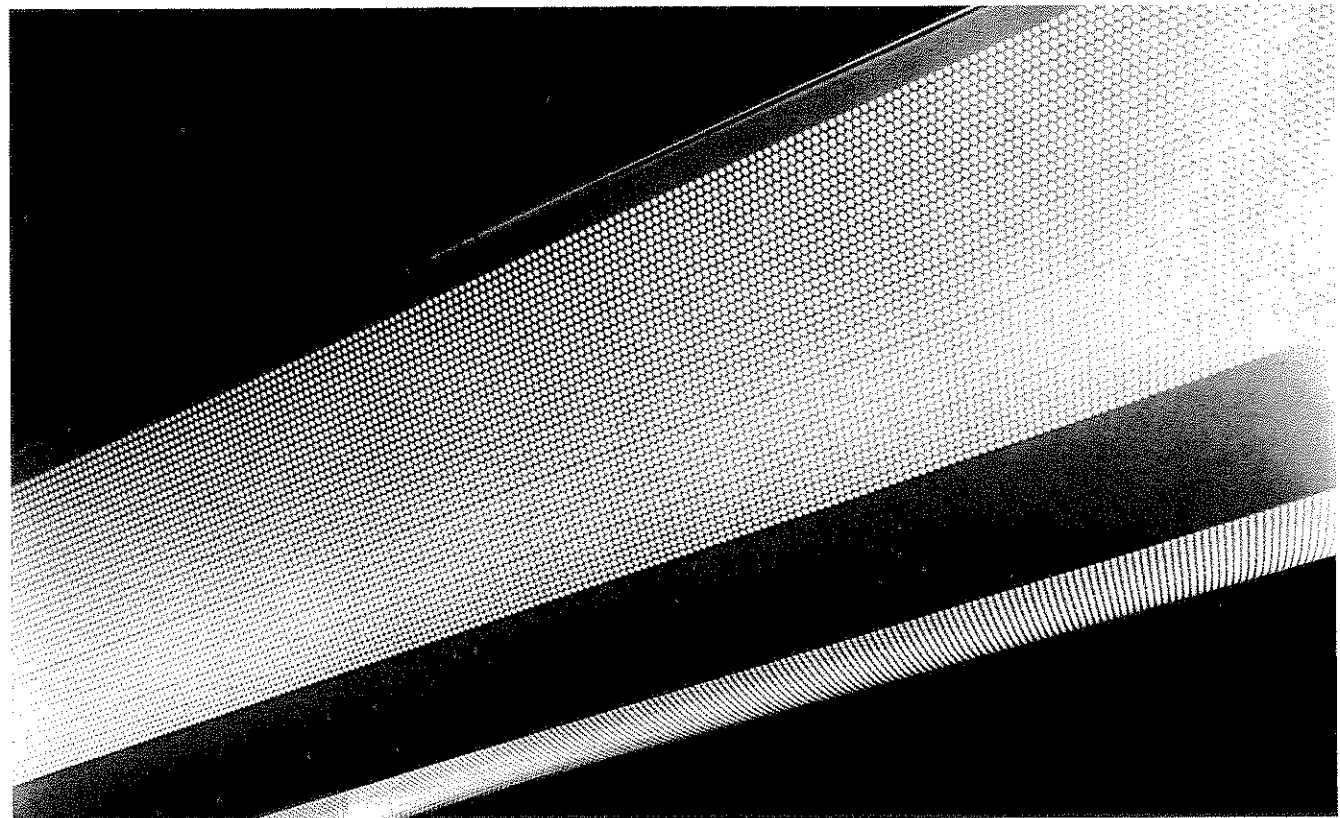
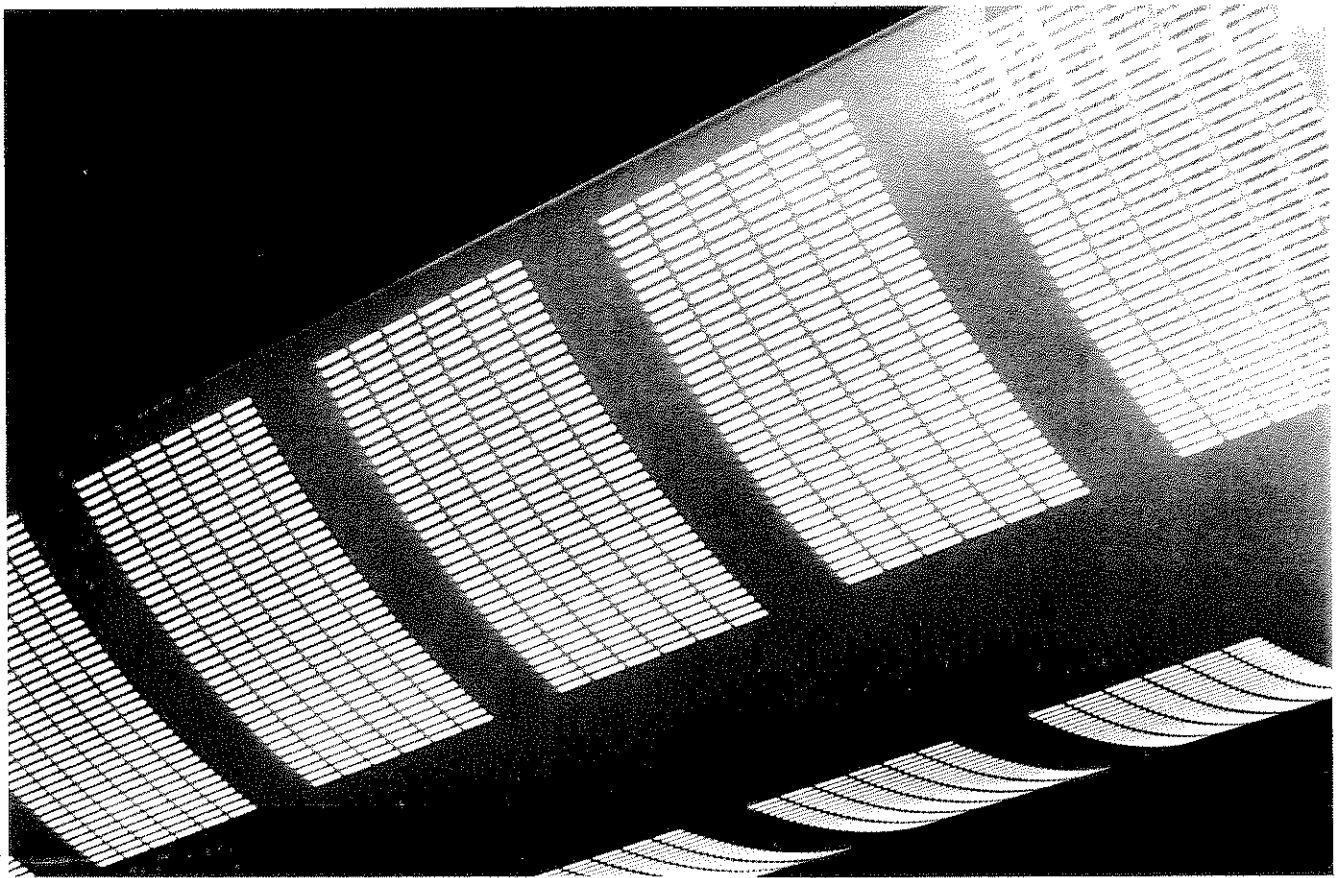
SERIES

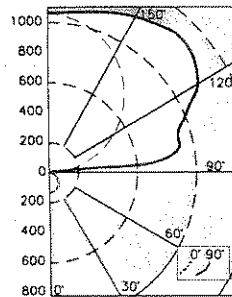
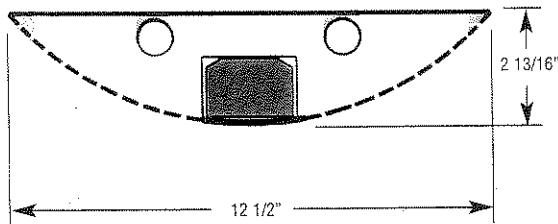


INDIRECT PENDANT MOUNTED

The blending of perforated steel and translucent diffusers creates an environment suitable for contemporary space design. The JDA was designed for open or individual offices. The computer designed reflecting system provides a wide spread indirect lighting distribution, with a soft direct component. The JDA can be utilized for continuous runs or individual applications.

EXHIBIT 100V

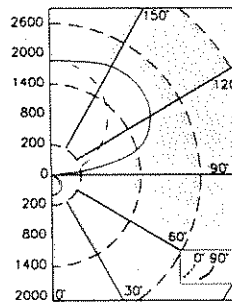
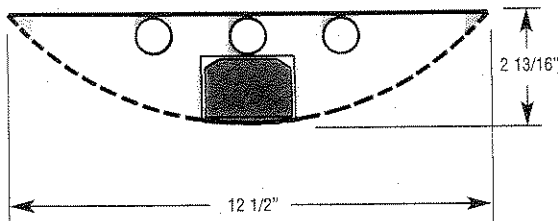


JDA-ID/D-232-T8-PFM

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD: pfc=0.20

pCC	.80				.70				.50				.30				.10				0
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR	1																				
0	83	83	63	83	72	72	72	72	51	51	51	33	33	33	16	16	16	16	16	8	
1	75	72	69	66	65	62	60	58	45	43	42	29	28	27	14	13	13			6	
2	69	63	58	54	59	55	51	47	39	37	35	25	24	23	12	12	11			5	
3	62	55	49	45	54	48	43	39	35	32	29	22	21	19	11	10	9			4	
4	57	49	42	38	49	42	37	33	31	28	25	20	18	16	10	9	8			3	
5	52	43	37	32	45	38	32	28	27	24	21	18	16	14	9	8	7			3	
6	46	38	32	27	41	34	28	24	25	21	19	16	14	12	8	7	6			3	
7	44	34	28	24	38	30	25	21	22	19	16	14	12	10	7	6	5			3	
8	41	31	25	21	35	27	22	18	20	17	14	13	11	9	6	5	4			2	
9	38	28	22	18	33	25	19	16	18	15	12	12	10	8	6	5	4			2	
10	35	25	20	16	30	22	17	14	16	13	11	11	9	7	5	4	4			2	

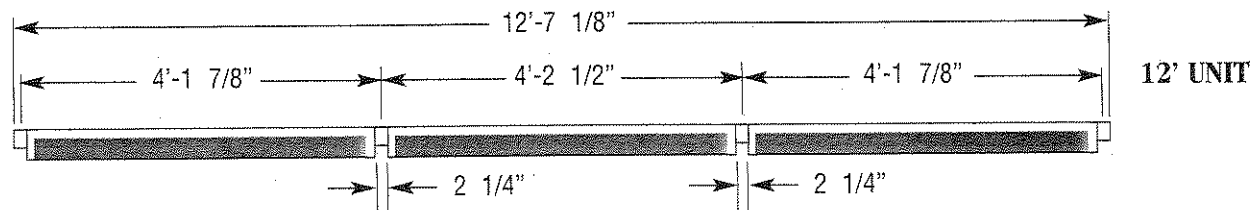
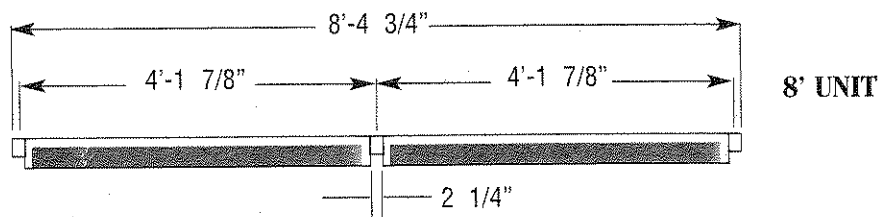
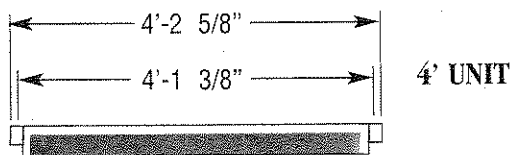
Number of lamps: 2 Lumens per lamp: 2850 Ballast Factor: 1.00

JDA-ID/D-332-T8-PFM

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD: pfc=0.20

pCC	80				70				50				30				10				0
pW	7	5	3	.1	7	5	3	.1	5	3		5	3		5	3	.1	0			
RCR																					
0	80	80	80	80	89	69	69	66	49	49	49	31	31	31	14	14	14	6			
1	73	69	66	64	63	60	58	56	43	41	40	27	26	25	12	12	11	5			
2	66	61	56	52	57	53	48	46	37	35	33	23	22	21	11	10	10	4			
3	60	53	48	43	52	46	42	38	33	30	28	21	19	18	9	9	8	4			
4	55	47	41	36	47	41	36	32	29	26	23	18	17	15	8	8	7	3			
5	50	42	35	31	43	36	31	27	26	23	20	16	14	13	7	7	6	3			
6	46	37	31	26	40	32	27	23	23	20	17	15	13	11	7	6	5	2			
7	43	30	24	23	37	29	24	20	21	17	15	13	11	10	6	5	5	2			
8	39	30	24	20	34	26	21	18	19	15	13	12	10	9	6	5	4	2			
9	36	27	21	17	31	24	19	15	17	14	11	11	9	7	5	4	4	2			
10	34	25	19	15	29	21	17	14	16	12	10	10	8	7	5	4	3	1			

Number of lamps: 3 Lumens per lamp: 2850 Ballast Factor: 1.00

MOUNTING FOR JDA 2T8 AND JDA 3T8 FIXTURES

HOUSING: Constructed of die-formed 20 gauge cold rolled steel.

Perforations 0.081" dia. holes, 74 holes per square inch.

FINISH: Baked white enamel.

LAMP SHIELDING: Fabricated from perforated metal with white underlay diffuser.

LAMPS: T8 and T12 rapid start (by others).

BALLASTS: 120 volt, 60 hertz, class P, ESB standard.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

BALLASTS: 277 volt, electronic and dimming ballasts available, Please specify.

FINISH: Custom paint finishes are available. Please supply color sample

CATALOG NUMBER

JDA 2T8 JDA 3T8

LIGHTING DISTRIBUTION

ID/D - INDIRECT/DIRECT

NUMBER OF LAMPS

2 - 2 Lamps

3 - 3 Lamps

4 - 4 Lamps

LAMP WATTAGE

25/OCT - 25 Watt (3FT) Octron

32/OCT - 32 Watt (4FT) Octron

40/OCT - 40 Watt (5FT) Octron

50T/OCT - Tandem 25 Watt (6FT) Octron

64T/OCT - Tandem 32 Watt (8FT) Octron

40BX - 40 Watt Biax

LAMP SHIELDING

PFM - 0.081 dia. holes (74 holes per sq. inch)
with white acrylic underlay diffuser

MOUNTING

W - Wall mounting

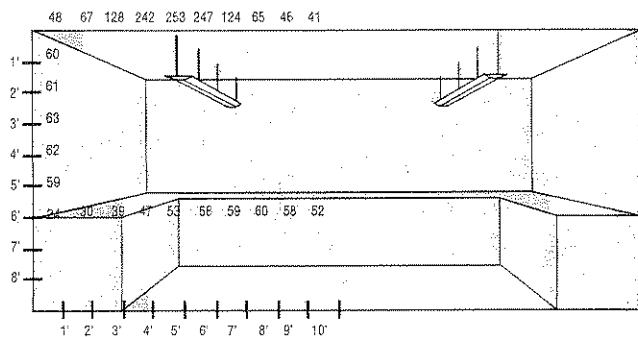
VOLTAGE

120V - 120 Volt

277V - 277 Volt

OVERALL LENGTH

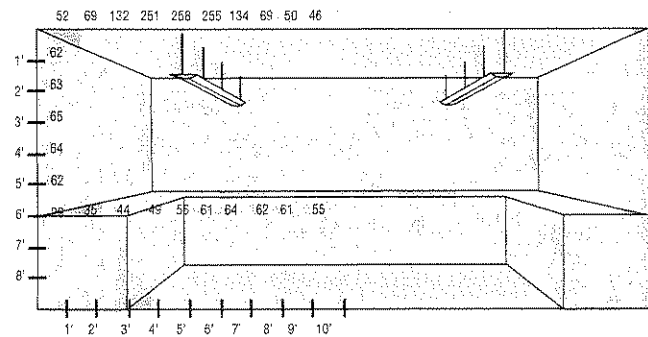
(Specify overall length)



FIXTURE: JDA-ID/D-232/OCT-PFM, 10' O.C., 1'-6" stem length.

ROOM: 32'X20'X8'6" with 80-50-20 reflectances.

NOTE: Values are initial illuminance.



FIXTURE: JDA-ID/D-332/OCT-PFM, 10' O.C., 1'-6" stem length.

ROOM: 32'X20'X8'6" with 80-50-20 reflectances.

NOTE: Values are initial illuminance.



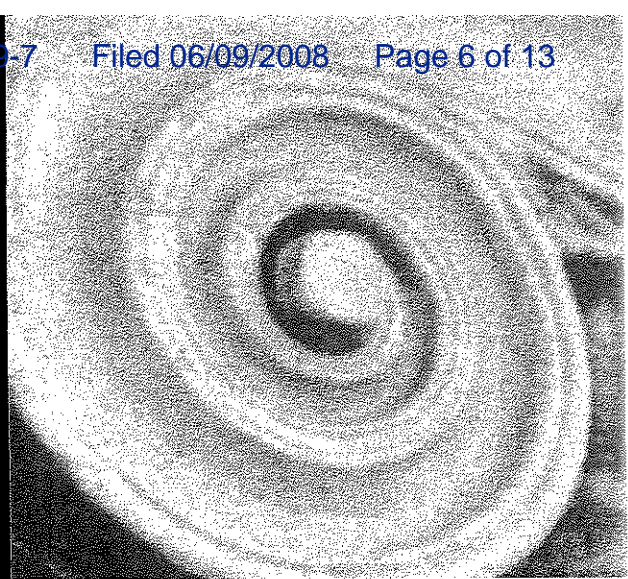
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212-751-1600 • 973-751-1600 • FAX-973-751-4931

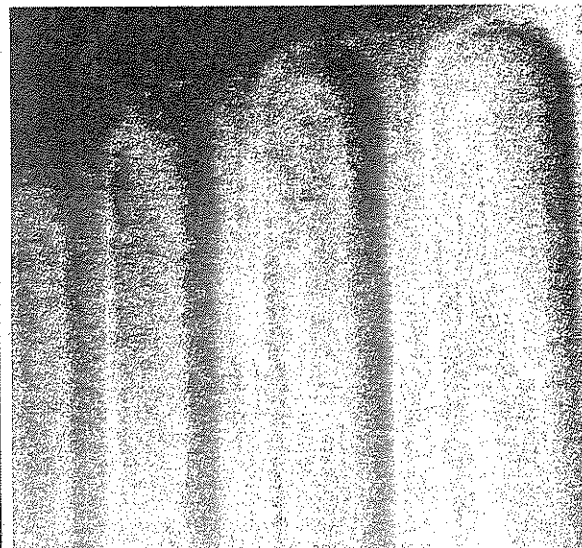
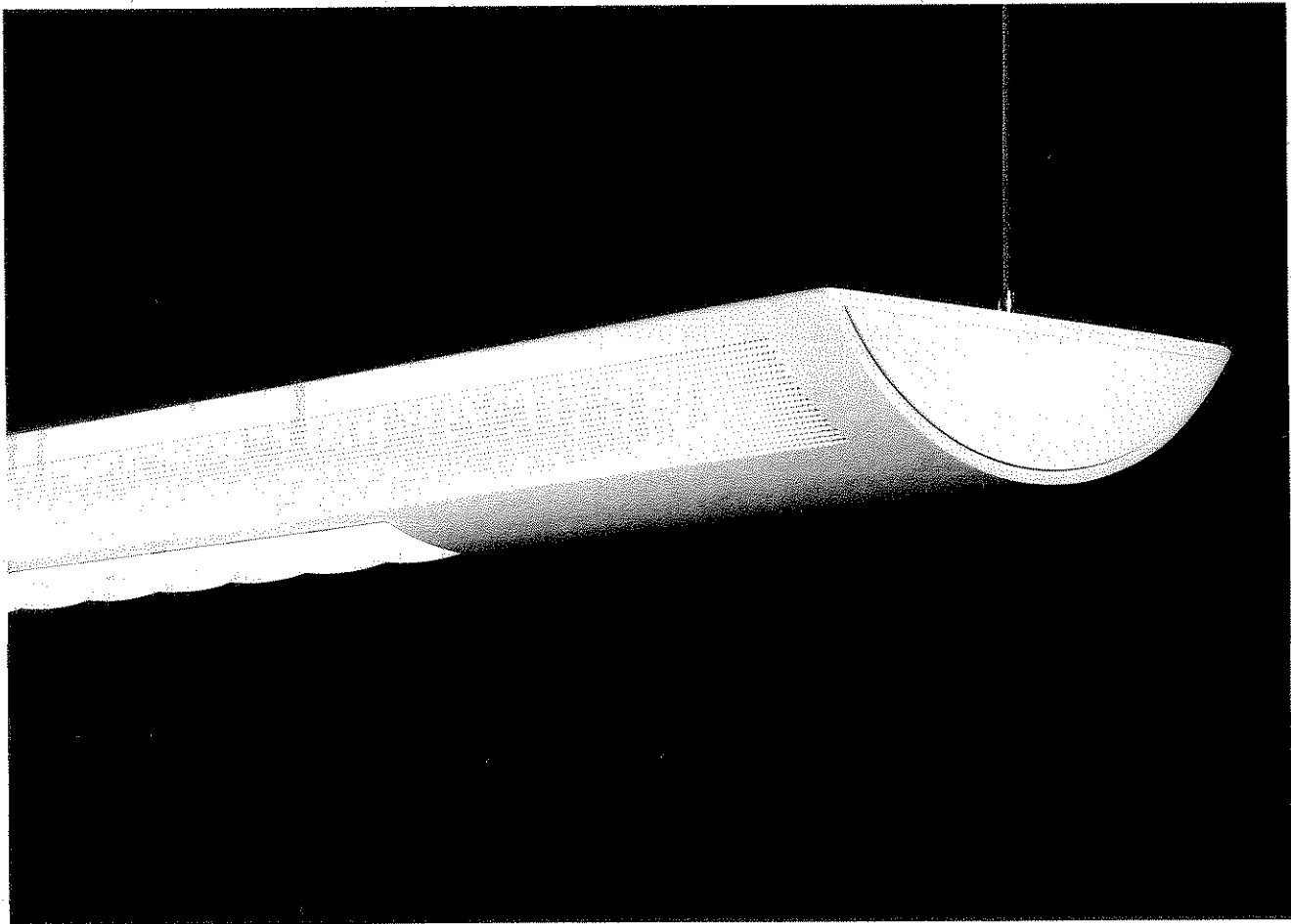
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SC 28 PF

S E R I E S



#10

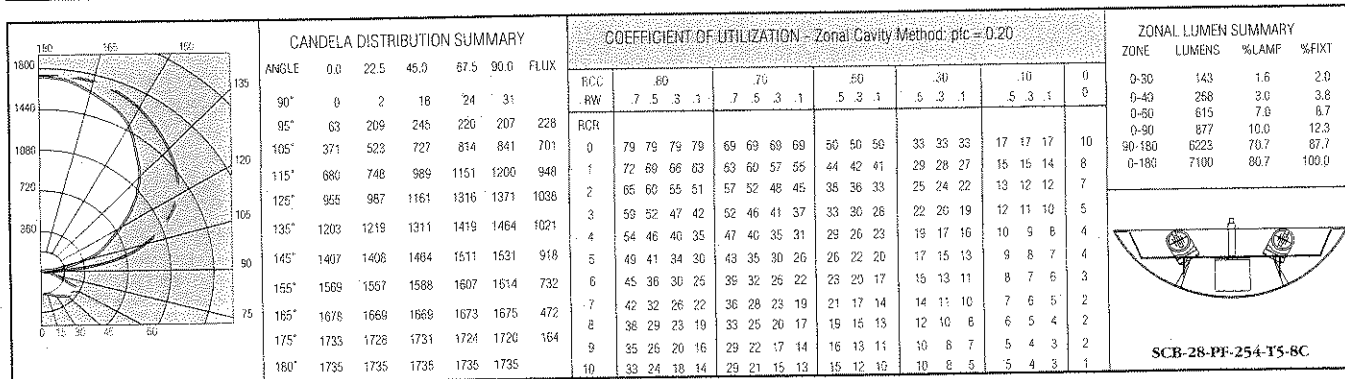
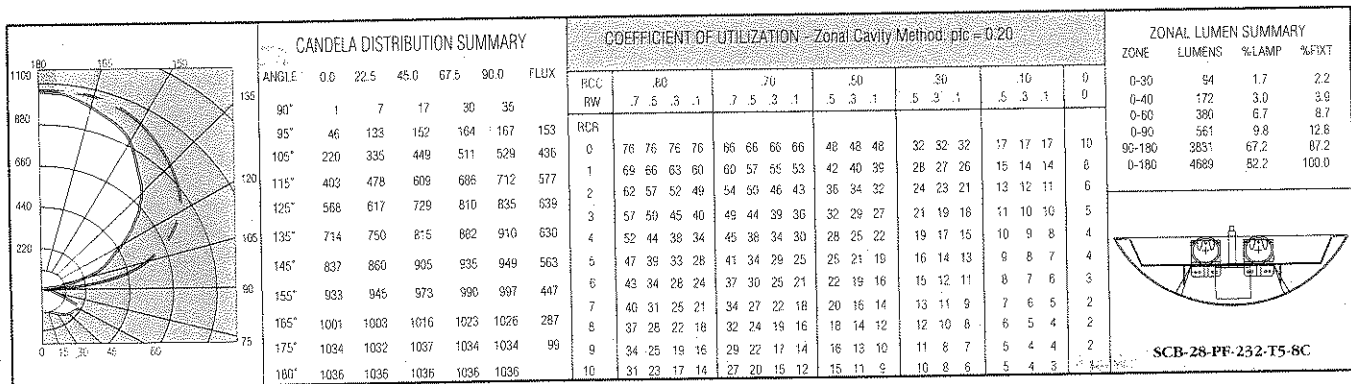
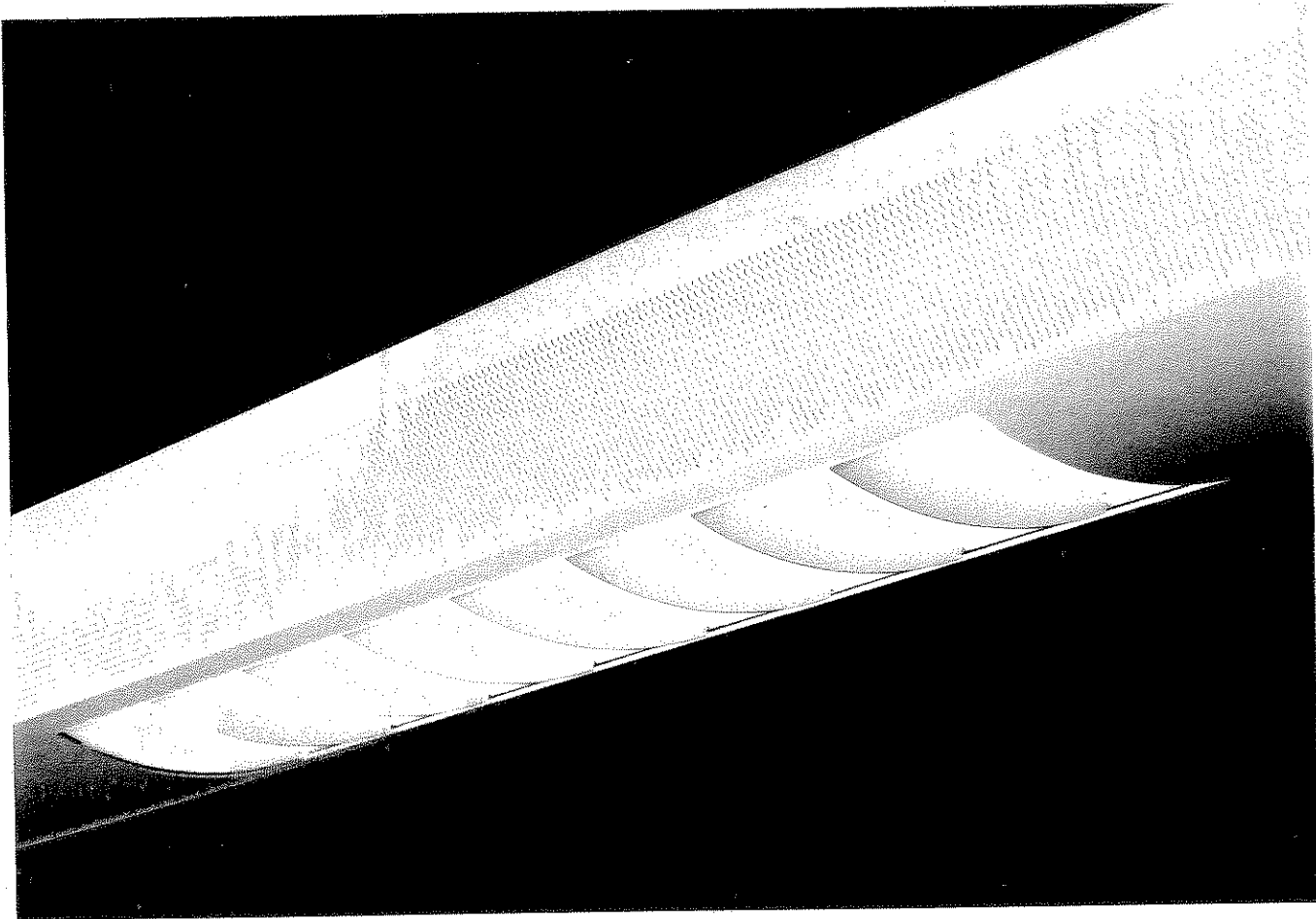


INDIRECT/DIRECT PENDANT MOUNTED

The SC 28PF series combines the blending of perforated steel and blade louvers to create an environment suitable for contemporary space design. The SC 28 PF is designed for open areas or individual offices.

The computer designed reflecting system provides a wide spread indirect lighting distribution with a strong, controlled direct component.

T5, T5HO and T8 lamps can be utilized. Contoured end caps are available to complete the overall fixture design.

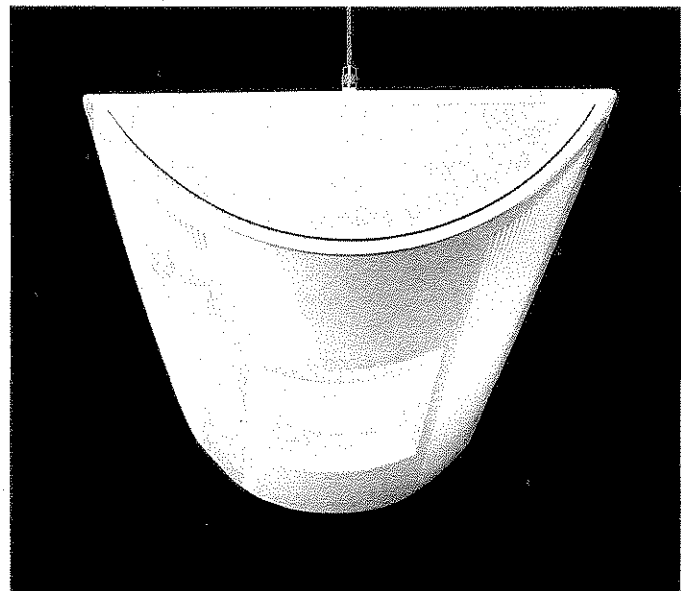


CATALOG NUMBER

SC-28-PF-ID/D

CATALOG NUMBER**NUMBER OF LAMPS****TYPE OF LAMPS****OVERALL LENGTH****OPTIONS (SEE SPECIFICATIONS)**

CATALOG NUMBER	(NO) LAMPS	OVERALL NOMINAL FIXTURE LENGTH
SC-28-PF-ID/D-1T5-4'	(1) 4' T5	4'
SC-28-PF-ID/D-1T5-4'	(2) 4' T5	4'
SC-28-PF-ID/D-3T5-4'	(3) 4' T5	4'
SC-28-PF-ID/D-2T5-8'	(2) 4' T5	8'
SC-28-PF-ID/D-4T5-8'	(4) 4' T5	8'
SC-28-PF-ID/D-6T5-8'	(6) 4' T5	8'
SC-28-PF-ID/D-1T5HO-4'	(1) 4' T5HO	4'
SC-28-PF-ID/D-2T5HO-4'	(2) 4' T5HO	4'
SC-28-PF-ID/D-3T5HO-4'	(3) 4' T5HO	4'
SC-28-PF-ID/D-2T5HO-8'	(2) 4' T5HO	8'
SC-28-PF-ID/D-4T5HO-8'	(4) 4' T5HO	8'
SC-28-PF-ID/D-6T5HO-8'	(6) 4' T5HO	8'
SC-28-PF-ID/D-1T8-8'	(1) 4' T8	4'
SC-28-PF-ID/D-2T8-8'	(2) 4' T8	4'
SC-28-PF-ID/D-2T8-8'	(2) 4' T8	8'
SC-28-PF-ID/D-4T8-8'	(4) 4' T8	8'



SCOW LIGHTING

HOUSING: Constructed of die-formed 18 gauge cold rolled steel. Perforations are 0.018 dia. (standard). 74 holes per square inch.

LAMP SHIELDING: Fabricated from perforated metal with acrylic overlay diffuser.

BAFFLE: Straight cross blade, 2" on-center spacing. Baked white enamel finish. Baffle is 2" long.

BALLAST: 120 Volt, 60 Hertz, Class P Electronic Standard.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

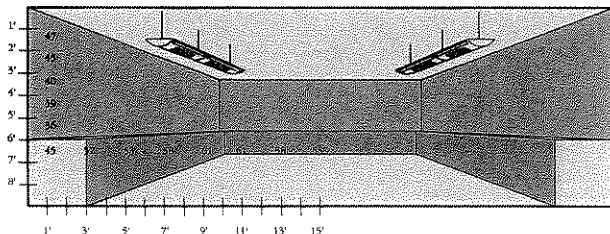
OPTIONS:

BALLASTS: 277 Volt, dimming ballasts available.

MOUNTING: Pendant - 1/2" dia., 18" long, standard. "P"=Pendent, "AC"=Aircraft cable. If different lengths are required, specify "P" or "AC" and required length. Example: "AC-24."

CONTOURED END CAPS: Contoured to fit end of run housing ends. Use suffix "CEC".

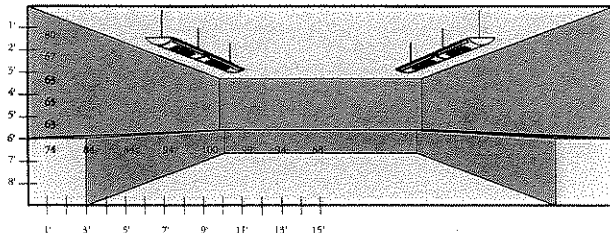
FINISH: Custom paint finishes are available. Please supply color chip.

ROOM DRAW

FIXTURE: SC-28-PF-232T8-8C

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCE

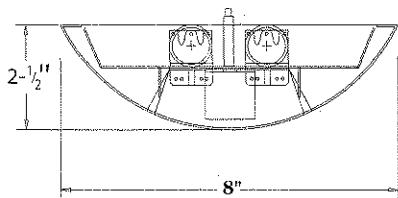
NOTE: VALUES ARE INITIAL ILLUMINANCE



FIXTURE: SC-28-PF-254-T5-8C

ROOM: 30'X20'X8'-6" WITH 80-50-20 REFLECTANCE

NOTE: VALUES ARE INITIAL ILLUMINANCE

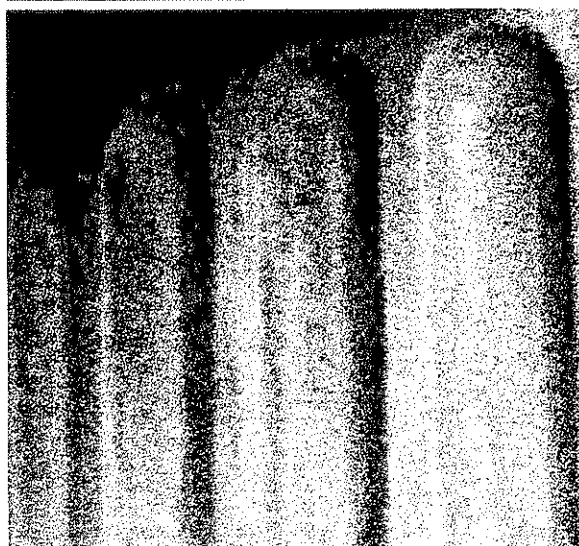
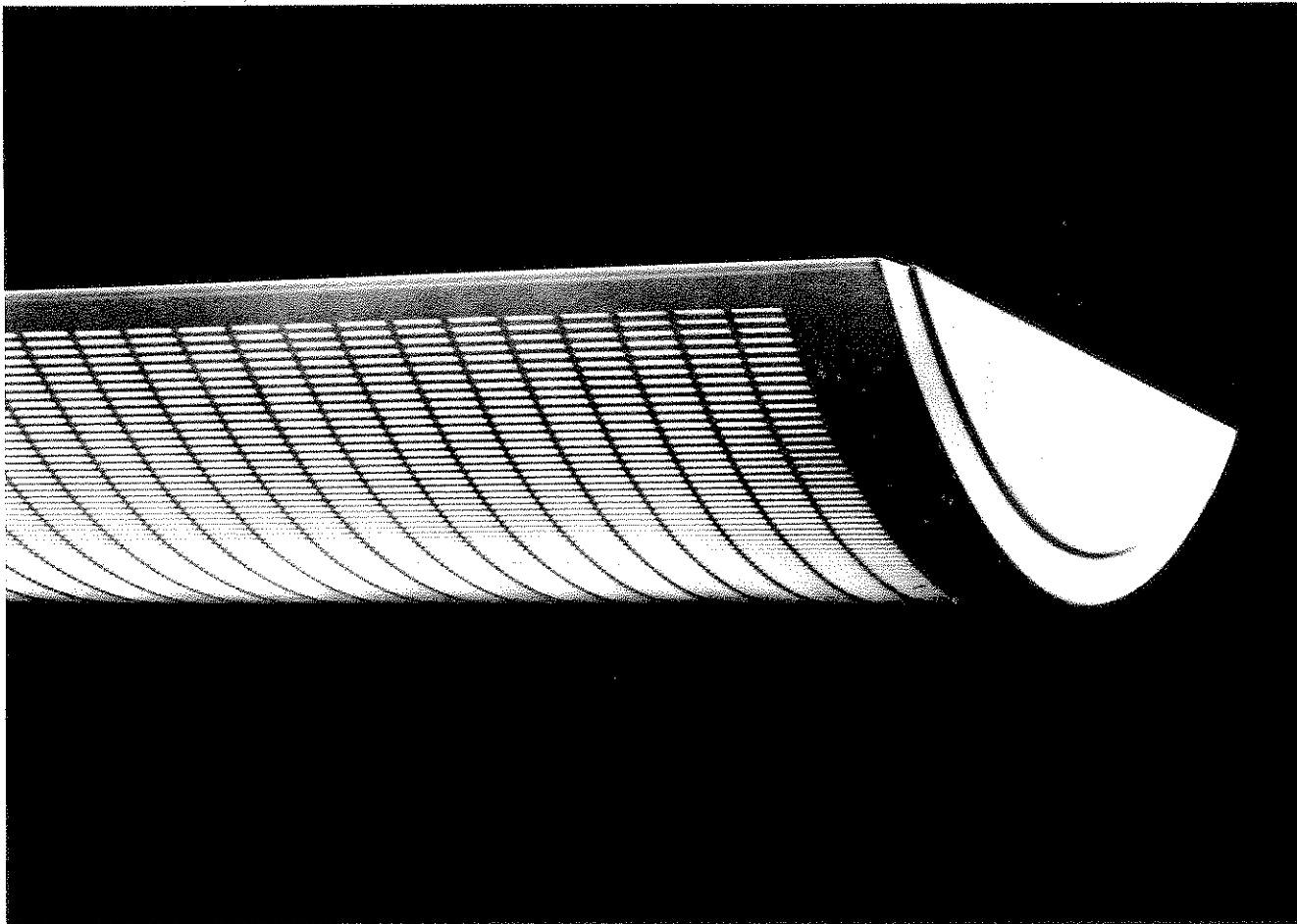
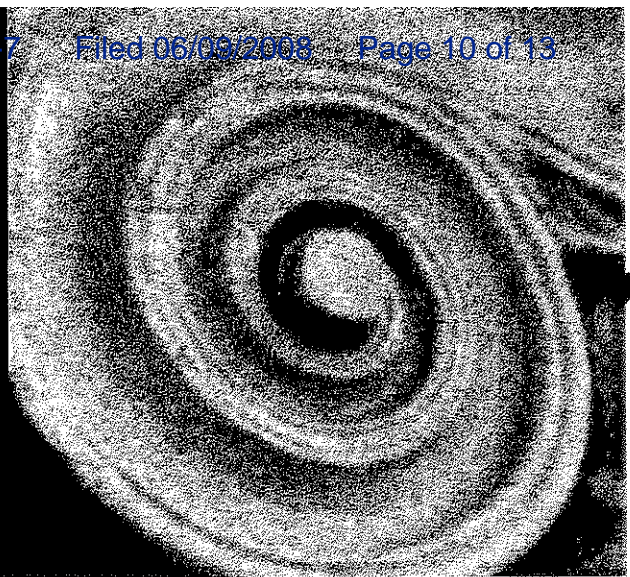


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CPB/X

S E R I E S



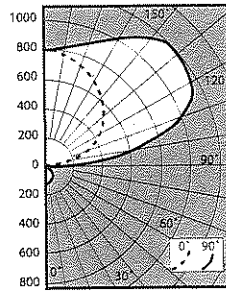
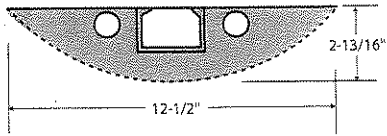
INDIRECT/DIRECT PENDANT

The CPB/X is designed with a fully perforated housing. Optional high-performance reflecting systems are available with a partially perforated housing. Affordability and photometric efficiency are features of the CPB/X series. Two and three T8-lamped fixtures are available in four and eight foot sections, perforated with holes or slots.

The CPB/X provides a wide spread indirect lighting distribution with a soft direct component. The series can be utilized in long continuous rows or individual applications.

FIXTURE PERFORMANCE

CPB/X-ID/D-232-T8-PFM

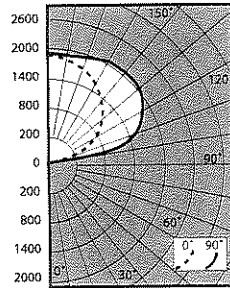
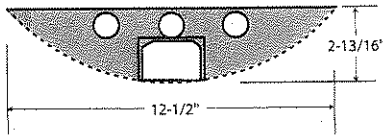


COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20

pCC	.80				.70				.50				.30				.10				0
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																					
0	77	77	77	77	68	68	68	68	51	51	51	35	35	35	20	20	20	14	14	14	14
1	71	67	65	62	62	59	57	55	44	43	42	31	30	29	18	18	17	12	12	12	12
2	64	59	55	51	56	52	48	45	39	37	35	27	26	25	16	16	15	10	10	10	10
3	59	52	47	42	52	46	42	38	35	32	29	24	22	21	15	14	13	9	9	9	9
4	54	46	40	36	47	41	36	32	31	28	25	22	20	18	13	12	11	8	8	8	8
5	49	41	35	31	43	36	31	27	27	24	21	19	17	16	12	11	10	7	7	7	7
6	45	36	31	26	40	32	27	24	25	21	19	17	15	14	11	9	9	6	6	6	6
7	42	33	27	23	37	29	24	21	22	19	16	16	13	12	10	8	8	5	5	5	5
8	38	29	24	20	34	26	21	18	20	17	14	14	12	10	9	7	7	5	5	5	5
9	36	27	21	17	31	24	19	16	18	15	12	13	11	9	8	7	6	4	4	4	4
10	33	24	19	15	29	22	17	14	16	13	11	12	10	8	7	6	5	3	3	3	3

Number of Lamps: 2 Lumens per Lamp: 2850 Ballast Factor: 1.00

CPB/X-ID/D-332-T8-PFM



COEFFICIENT OF UTILIZATION - Zonal Cavity Method: pcf = 0.20

pCC	.80				.70				.50				.30				.10				0
pW	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																					
0	80	80	80	80	69	69	69	69	49	49	49	31	31	31	14	14	14	6	6	6	6
1	73	69	66	64	63	60	58	56	43	41	40	27	26	25	12	12	11	5	5	5	5
2	66	61	56	52	57	53	49	46	37	35	33	23	22	21	11	10	10	4	4	4	4
3	60	53	48	43	52	46	42	38	33	30	28	21	19	18	9	9	8	4	4	4	4
4	55	47	40	36	47	41	36	32	29	26	23	18	17	15	8	8	7	3	3	3	3
5	50	42	35	31	43	36	31	27	26	23	20	16	14	13	7	7	6	3	3	3	3
6	46	37	31	26	40	32	27	23	23	20	17	15	13	11	6	6	5	2	2	2	2
7	43	30	24	23	37	29	24	20	21	17	15	13	11	10	6	5	5	2	2	2	2
8	39	30	24	20	34	26	21	18	19	15	13	12	10	9	6	5	4	2	2	2	2
9	36	27	21	17	31	24	19	15	17	14	11	11	9	7	5	4	4	2	2	2	2
10	34	25	19	15	29	21	17	14	16	12	10	10	8	7	5	4	3	1	1	1	1

Number of Lamps: 3 Lumens per Lamp: 2850 Ballast Factor: 1.00

ROOM VIEW

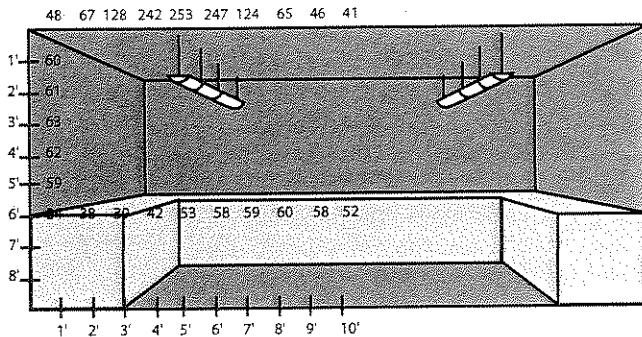


FIGURE: CPB/X-ID/D-232/OCT-PFM, 10' ON CENTER, 1' - 3' STEM LENGTH
ROOM: 32'X20'X8'-6" WITH 80-50-20 REFLECTANCES.
NOTE: VALUES ARE INITIAL ILLUMINANCE.

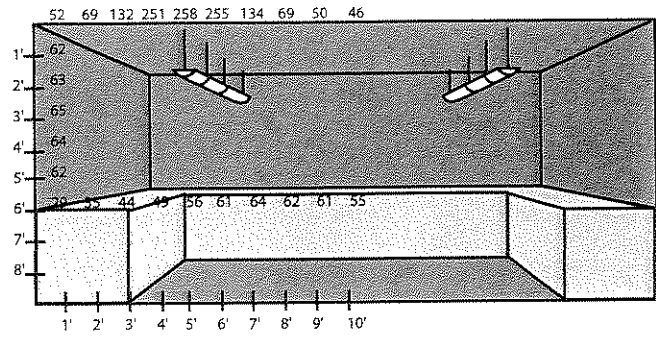
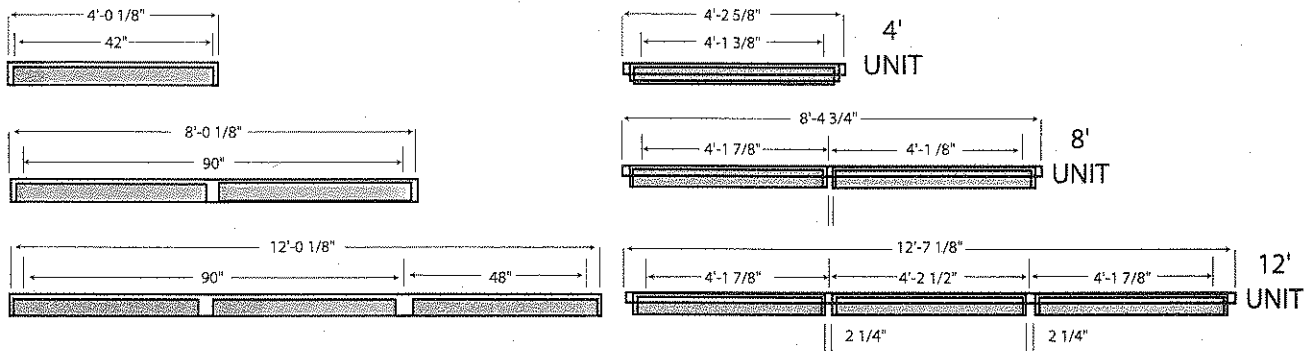
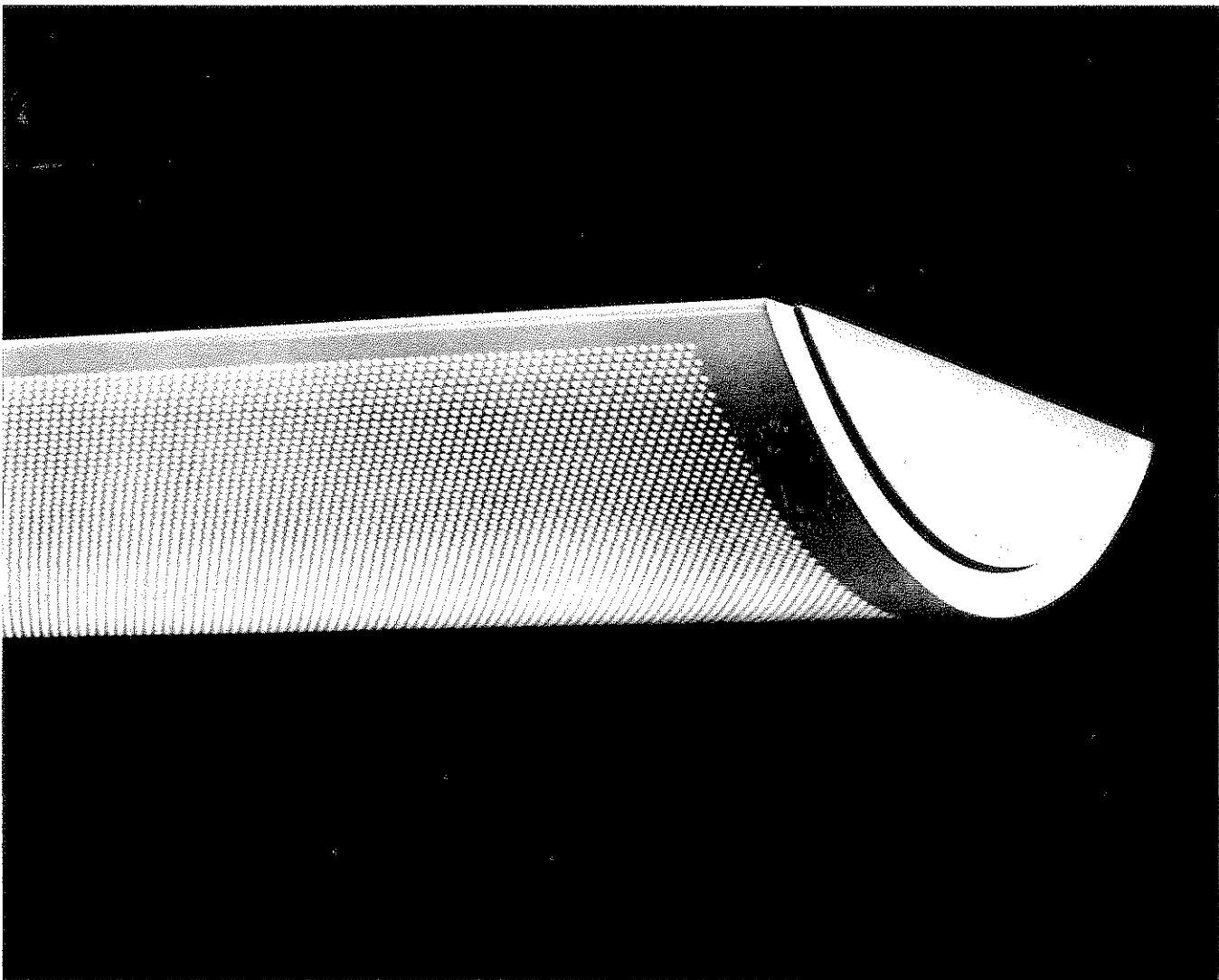


FIGURE: CPB/X-ID/D-332/OCT-PFM, 10' ON CENTER, 1' - 3' STEM LENGTH
ROOM: 32'X20'X8'-6" WITH 80-50-20 REFLECTANCES.
NOTE: VALUES ARE INITIAL ILLUMINANCE.

MOUNTING



PICTURE VIEW



SPECIFICATIONS

HOUSING: Constructed of die formed 18 gauge steel. Perforations are 0.081" dia. holes (74 holes per inch). Slotted perforations available (see photograph). Consult National Lighting Company for other styles and perforation configurations.

REFLECTOR: Die-formed steel with high reflectance white enamel finish is standard. Optional high-performance specular reflector is available. Specify FPM (available in partially perforated housing only).

LAMPS: T8, by others.

FINISH: Baked white enamel.

LAMP SHIELDING: Fabricated from perforated metal with white overlay acrylic diffuser.

LABELING: Fixtures are Underwriters Laboratories listed and bear the I.B.E.W., AFL-CIO label.

OPTIONS:

BALLASTS: 277 Volt and dimming ballasts available. Please specify.

MOUNTING:

PENDANT: 1/2" Diameter, 18" long, standard. If different lengths are required, please specify. Example P-24.

AIRCRAFT CABLE: Available. Specify "AC" and required length. Example AC-24"

ORDERING KEY**CATALOG NUMBER**

CPB/X

LIGHTING**DISTRIBUTION**

ID/D - Indirect/direct

NUMBER OF LAMPS

2 - 2 Lamps

3 - 3 Lamps

LAMP WATTAGE

25/OCT - 25 Watt (3FT) Octon

32/OCT - 32 Watt (4FT) Octon

40/OCT - 40 Watt (5FT) Octon

50T/OCT - Tandem 25 Watt (6FT) Octon

64T/OCT - Tandem 32 Watt (8FT) Octon

LAMP SHIELDING

PFM - 0.081" Dia. (74 Holes per square inch) with white overlay

SL-PFM - Slotted perforations

(see photography). Consult National Lighting for other variations

REFLECTING SYSTEM

PPM - Partially perforated housing

high-performance reflecting system

FPM - Fully perforated housing standard reflecting system

MOUNTING

P - Pendant (Specify length)

AC - Aircraft cable (Specify length)

VOLTAGE - 120V OR 277V

120V - 120 Volt

277 - 277Volt

OVERALL LENGTH

Specify overall fixture row length

FINISH

Custom paint finishes are available. Please supply color chip.



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Attorneys for Plaintiff

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NATIONAL LIGHTING COMPANY, INC., a New Jersey Corporation,) Case No. 08cv03150 (NRB)
)
Plaintiff,)
)
vs.) FIRST AMENDED COMPLAINT AND
) JURY TRIAL DEMAND
)
BRIDGE METAL INDUSTRIES, LLC, a New)
York Limited Liability Company; JOSEPH)
MESSA, an individual; GALAXY)
SWITCHGEAR INDUSTRIES, LLC, a New)
York Limited Liability Company; BLAISE)
FREDELLA, an individual; ISAK LEMBERG,)
an individual; BORIS BREGMAN, an individual;)
PICASSO LIGHTING INDUSTRIES LLC, a)
New York Limited Liability Company;)
INDEPENDENT LIGHTING, LLC, a New York)
Limited Liability Company; GREEN LIGHT)
SOLUTIONS, LLC; and MITCHELL)
BLOOMBERG, an individual,)
)
Defendants.)
)
)

Plaintiff, NATIONAL LIGHTING COMPANY, INC. ("National"), through its
attorneys, SHUSTAK & PARTNERS, P.C., complaining of Defendants BRIDGE
METAL INDUSTRIES, LLC ("Bridge"), JOSEPH MESSA ("Messa"), GALAXY

SWITCHGEAR INDUSTRIES, LLC ("Galaxy"), BLAISE FREDELLA ("Fredella"). ISAK LEMBERG, ("Lemberg"), BORIS BREGMAN ("Bregman"); PICASSO LIGHTING INDUSTRIES, LLC ("Picasso"); INDEPENDENT LIGHTING, LLC ("Independent"); GREEN LIGHT SOLUTIONS, LLC ("Green Light"); and MITCHELL BLOOMBERG ("Bloomberg") (referred to collectively herein as "Defendants"), as and for its Complaint alleges, upon information and belief except as otherwise particularly stated, as follows:

JURISDICTION AND VENUE

1. This Court has jurisdiction over this action pursuant to 15 U.S.C. § 1121, 28 U.S.C. § 1331, 28 U.S.C. § 1338, and 28 U.S.C. § 1367. The Court also has jurisdiction over this action by virtue of diversity of citizenship, 28 U.S.C. §§ 1332, in that Plaintiff is a citizen of one state and all Defendants are citizens of a different state, and the amount in controversy exceeds \$75,000, exclusive of interest and costs.

2. The state claims in this action are brought pursuant to this Court's ancillary and pendent jurisdiction over such claims.

3. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(b), as Defendants' conduct occurred and continues to occur in this judicial district.

THE PARTIES

4. Plaintiff National is and was at all times relevant to this action a corporation organized under the laws of the state of New Jersey, with its principal place of business at 522 Cortlandt Street, Belleville, New Jersey 07109.

5. Defendant Galaxy is and was at all times relevant to this action a Limited Liability Company doing business in New York and organized under the laws of the state

of New York, with its principal place of business at 717 South Third Avenue, Mount Vernon, New York 10550.

6. Defendant Bridge is and was at all times relevant to this action a Limited Liability Company doing business in New York and organized under the laws of the state of New York, with its principal place of business at 717 South Third Avenue, Mount Vernon, New York 10550.

7. Defendant Messa is and was at all times relevant to this action an individual residing in the state of New York, and the President of Galaxy and Bridge.

8. Defendant Fredella is and was at all times relevant to this action an individual residing in the state of New York, and an officer, director, and employee of Galaxy and Bridge.

9. Defendant Lemberg is and was at all times relevant to this action an individual residing in the state of New York, and an officer, director, and employee of Galaxy and Bridge.

10. Defendant Bregman is and was at all times relevant to this action an individual residing in the state of New York, and an officer, director, and employee of Galaxy and Bridge.

11. Defendant Picasso is and was at all times relevant to this action a Limited Liability Company doing business in New York and organized under the laws of the state of New York, with its principal place of business at 717 South Third Avenue, Mount Vernon, New York 10550.

12. Defendant Independent is and was at all times relevant to this action a Limited Liability Company doing business in New York and organized under the laws of

the state of New York, with its principal place of business at 92 Hazelwood Drive, Jericho, New York 11753.

13. Defendant Green Light is and was at all times relevant to this action a Limited Liability Company doing business in New York and organized under the laws of the state of New York, with its principal place of business at 92 Hazelwood Drive, Jericho, New York 11753.

14. Defendant Bloomberg is and was at all times relevant to this action an individual residing in the state of New York, and an officer, director, and employee of Independent, and Green Light. Bloomberg is the former president of The Lighting Group of New York City. The Lighting Group of New York City was owned and operated by Genlyte Lightolier Thomas Group, a New York Limited Liability Company whose public records reflect hundreds of millions of dollars in annual revenues and which was, upon information and belief, acquired in 2008 by Royal Phillips Electronics, N.V., manufacturer of the well-known "Phillips" brand electronics.

15. Evidence which will be gathered during discovery and presented at trial will show that each Defendant was at all times relevant hereto a controlling person, agent, and/or alter ego of each other Defendant, and in doing the acts as herein alleged, was acting within the course and scope of his or its authority as such with the expressed and implied permission, instruction, knowledge, consent, and ratification of each other Defendant. Each Defendant did influence and govern each other Defendant with such a degree of unity of interest and ownership so that the individuality, or separateness, of each Defendant have ceased to exist.

16. National alleges that the facts hereafter are such that an adherence to the fiction of the separate existence of the Defendants would sanction a fraud or promote a miscarriage of justice.

SUMMARY OF THE CASE

17. This case arises out of a scheme and conspiracy amongst all of the Defendants whereby they conspired to and did cause Bridge to intentionally breach a confidentiality agreement between National and Bridge dated July 28, 2005 (the "Confidentiality Agreement" or "Agreement", a true and correct copy of which is marked and attached hereto as Exhibit "A"). The other Defendants were co-conspirators with, and alter egos of Bridge, and participated in the decision to have Bridge breach the Agreement with the intent, and for the purpose of allowing the Defendants to purloin, at no cost and for no payment to National, National's trade secrets, business operations, technical know-how and other intellectual property and enter the architectural fluorescent lighting business with the intention of unlawfully competing with National and stealing National's customers and business.

18. National is a well-established, nationally recognized company that has been engaged in the business of manufacturing and designing fluorescent lighting fixtures for installation in commercial offices, educational facilities and government buildings since 1941. National was one of the first companies in the United States to enter the business of manufacturing fluorescent lighting fixtures, which it did shortly after the fluorescent light bulb was introduced at the 1939 New York World's Fair. From 1941 until approximately 2005, National manufactured all of its own lighting fixtures at its plant located in Belleville, New Jersey.

19. In or about late 2004, early 2005, National met with Bridge, Galaxy and the various individuals associated with those entities (including those named as defendants herein) (Bridge, Galaxy and the individuals named as defendants and associated with Bridge and Galaxy are collectively referred to as the "Bridge Defendants") and entered into negotiations to have Bridge/Galaxy manufacture National products for National. National felt, at the time, that Bridge/Galaxy could manufacture the actual lighting fixtures and stamped metal housings at a more economical price than National. During the first half of 2005, there were negotiations between representatives of National and all of the individual Defendants, other than Bloomberg, regarding an agreement between National and Bridge/Galaxy whereby Bridge/Galaxy would manufacture various lighting fixtures, housings and other materials for National. National, however, was concerned that it be able to protect all of its technical know-how, garnered over the course of more than sixty years of business, trade-secrets and other intellectual property before giving that highly valuable information to Bridge/Galaxy.

20. On or around July 28, 2005, following months of negotiations, National and Bridge entered into the Agreement and Bridge/Galaxy began to manufacture and assemble for National lighting fixtures, housings and other parts to be incorporated into National lighting fixtures. In furtherance of the Agreement, and relying upon the terms of the Agreement, National did provide the Bridge Defendants with trade secrets comprised of confidential drawings, formulas, designs, documentation, on-hands training and seminars, and other information (the "Confidential Information") for the purpose of manufacturing National's products. The Bridge Defendants agreed not to disclose the Confidential Information except for those purposes and to those individuals designated in

the Agreement. National also provided its employees to show the Bridge Defendants how to manufacture National's products and parts and explain to the Bridge Defendants all of the technical information and knowledge required to manufacture National lighting fixtures. Prior to entering into the Agreement, none of the Bridge Defendants had been in the business of manufacturing any kind of lighting fixtures, including but not limited to fluorescent lighting fixtures. Any knowledge the Bridge Defendants obtained regarding the manufacture of fluorescent lighting fixtures was acquired from National and covered, at all times, by the terms of the Agreement.

21. In or around November 2007, National discovered that the Bridge Defendants had breached the Agreement and, in concert with the other named Defendants, had purloined and stolen for their own use and benefit and were using National's designs, technical know-how, drawings and other intellectual property specifically covered by the Agreement for Defendants' exclusive benefit to manufacture and market their own lighting fixtures. The individual Bridge Defendants were the moving, active conscious force behind this wrongful conduct. Upon information and belief, Defendants continue to act in concert to manufacture, market and sell fixtures using the designs the Bridge Defendants misappropriated from National, palming off the products as their own to National's clientele.

22. Defendants' conduct as alleged herein constitutes violations of federal law under Section 43(c) of the Lanham Act, 15 U.S.C. § 1125 and of the laws of the state of New York as set forth herein. As a result of Defendants' conduct, National has suffered and will continue to suffer damages and accordingly bring this action for monetary and injunctive relief.

MATERIAL ALLEGATIONS

National Lighting's Business History

23. National is one of the country's pioneer manufacturers and designers of fluorescent lighting fixtures, first marketing its products to the public shortly after the fluorescent light bulb was introduced in 1939 at the World's Fair. Since 1941, National has manufactured high quality, architectural grade lighting fixtures for commercial, educational, hospital, governmental and other large-scale facilities. It produces the fixtures at its plant in Belleville, New Jersey.

24. National markets its products throughout the United States using various independent sales agencies. A significant portion of its clientele is situated in the Northeastern United States. National's products are currently installed in most major office buildings in the New York tri-state vicinity and in various structures throughout the country.

National Lighting's Products and their Trade Dress

25. Since its inception, National has invested enormous amounts of time, money and other resources into developing distinctive products which contractors, owners, architects and lighting consultants and engineers readily associate with National. Through years of hard work and effort, and the expenditure of substantial monies, National's fixtures carry a trade dress recognized by its customers, end users and others in the lighting industry. Its fixtures are installed in every major office building in New York City, including the iconic Chrysler and Empire State Buildings.

26. To National's knowledge, there are, throughout the country, between approximately fifteen to twenty-five other fluorescent lighting fixture manufacturers

(besides Defendants), some of which have billions of dollars in annual sales revenues, who market products somewhat comparable to National's. The National products, however, are distinctive from those manufactured by any of the other lighting manufacturers it considers its competitors. National's products' trade dress is visibly different from other manufacturers and consists of the following non-functional elements: the positioning of the fluorescent bulb, the angle at which the metal frame is curved, the placements of screws, the appearance of the inside parts, the lack of visibility of hardware, the method of wiring, the shielding design and shielding width, fixture depth, and the overall color and texture combinations.

27. National has developed a trade dress with a total image so distinct that a quick examination of these factors will cause its customers, potential customers and those involved in the selection and purchasing of lighting fixtures for commercial use to instantly recognize the origin of its product as National's even though its architectural fluorescent lighting fixtures lack identifiable labels or markings. So distinctive are National's products, in fact, that many architects and engineers in the country specify National's fixtures in the plans they draw up for buildings. These individuals are known in the lighting industry as "specifiers" and they specify, when plans are drawn for any kind of renovation or construction, which brand of fluorescent light fixtures are to be used.

28. National's designs, formulas and methods for creating its fixtures were trade secrets and proprietary information developed and owned by and known only to National and its representatives until 2005, when National entered into the Confidentiality Agreement. Prior to then, National kept its designs, formulas and methods private, to

maintain its products' distinctive trade dress. For example, National's fixtures are assembled in a certain manner that, without proper training from a National representative, would be exceedingly complicated, time-consuming and expensive to duplicate. As described below, National provided such training, methodology, and design to the Bridge Defendants only after the Bridge Defendants agreed to and executed the Confidentiality Agreement. National never revealed its trade secrets to another company prior to entering into the Agreement. It continues to take special efforts to protect the confidence of its trade secrets, including filing this action against Defendants.

29. In addition to developing its products, National has invested a great deal of time and effort into creating customized fixtures tailored to meet its customers and potential customers' specific needs. This involves building a relationship of trust with the individual end user, specifier, architect or contractor, working closely with them to ascertain the best possible, most appropriate National product for the job and engineering for them a perfectly designed fixture to function in its required capacity. The amount of goodwill National has amassed through its efforts in this regard is so vast it cannot be quantified and the loss of that goodwill would be extremely difficult if not impossible to quantify.

30. To date, National's efforts have culminated in a distinctive non-functional trade dress that carries secondary meaning, as its longstanding consumers associate its products with only one manufacturer.

The Confidentiality Agreement and Potential Merger

31. Prior to entering into the Agreement with National, the Bridge Defendants were never in the business of making commercial fluorescent lighting fixtures. Instead,

they manufactured products such as one or two residential, non-fluorescent lighting fixtures, switchgear and switchboard apparatus, HVAC (Heat Ventilation Air Conditioning) duct work, and a vast array of display products for Bridge Metal Industries. Their first foray into the architectural specification grade fluorescent lighting business occurred when National began considering a merger transaction (the “potential merger”) with Galaxy and Bridge in or around 2005.

32. The details and parameters of the potential merger are set forth in an unsigned yet circulated letter of intent by National, Galaxy and Bridge dated July 2005, wherein the parties defined specific aspects of the potential merger such as asset acquisition, representations and warranties, closing date, and a license agreement. (A true and correct copy of this July 2005 letter of intent is marked and attached hereto as Exhibit “B”.) The July 2005 letter is unsigned but sets forth those terms which National, Galaxy and Bridge collectively understood would define the potential merger and reflects the status of their collective negotiations and discussions as of July, 2005.

33. In early 2005, National entered into negotiations with the Bridge Defendants for an arrangement whereby they would manufacture National products *for National exclusively*. After negotiation between the parties, in anticipation of the potential merger, National required the Bridge Defendants to sign the Confidentiality Agreement. Bridge signed the Confidentiality Agreement on behalf of itself and, acting as Galaxy’s agent, alter ego, and otherwise controlling entity on behalf of Galaxy. Defendants Mesa and Fredella had meetings with National both before and after the Agreement was signed in the company of National’s accountant. Mesa and Fredella clearly conducted themselves

at those meetings as Galaxy's decision makers. Defendants Bregman and Lemberg acquiesced to these discussions.

34. Pursuant to the Confidentiality Agreement, and relying upon it and the protection it provided, National agreed to provide the Bridge Defendants with the Confidential Information, comprised of trade secrets including but not limited to: drawings, formulas, designs, specification sheets, cut sheets, computer generated images, instructions for assembly, actual fixture samples, and hands-on training seminars. (See Exh. A.) The parties to the Confidentiality Agreement agreed that the Bridge Defendants would use National's trade secrets solely to manufacture the fixtures for National, to allow National to evaluate the merits of the potential merger. (See Exh. A.)

35. Over the course of several months, National provided to the Bridge Defendants the Confidential Information, as provided by the Confidentiality Agreement. Representatives from National worked closely and regularly with Galaxy's and Bridge's employees and representatives to instruct them on manufacturing techniques. National also informed them where to purchase certain necessary parts and revealed to them National's longstanding clientele's contact information. All of this instruction and information were trade secrets protected under the Confidentiality Agreement. Relying upon the Agreement, National essentially taught the Bridge Defendants the entire business of designing, manufacturing and engineering National lighting fixtures.

36. After months of assessing the working relationship between National and the Bridge Defendants, National decided against the potential merger and those negotiations ended. The Bridge Defendants did continue to manufacture, for National, National lighting fixtures and the Confidentiality Agreement continued in full force and effect.

37. In or around 2006, National made it clear to the Bridge Defendants that the potential merger would not be consummated, upon which the Bridge Defendants were immediately obligated under the Agreement to either destroy all originals and copies of Confidential Information or return it all to National. (See Exh. A.) The Bridge Defendants continue to be bound by the Confidentiality Agreement.

Bridge Defendants' Misappropriation and Breach of the Confidentiality Agreement

38. In late 2007, National learned that instead of destroying or returning the Confidential Information, the Bridge Defendants had conspired to and had caused Bridge to breach the Agreement and were using the Confidential Information without National's permission to manufacture, market, and sell products apparently identical to National's.

39. The President of National personally visited Galaxy's and Bridge's showroom in late 2007 and saw firsthand that Defendants had created National-like fixtures, virtual clones of the National product line, which were being marketed to the public in Defendants' showroom. National's President instantly recognized the products as clones of National's products and inquired about them with a Defendant representative, who is in fact named Defendant Lemberg. (True and correct copies of brochures of National's products and photos of Defendants' showroom displaying Defendants' National-like fixtures are collectively marked and attached hereto as Exhibit "C".)

40. Lemberg proudly proclaimed to National's President that Defendants were now in the business of manufacturing and selling to National's customers and potential customers architectural grade fluorescent lighting.

Lemberg then proceeded to hand National's President specification sheets (collectively, the "specification sheets") for certain National lighting fixtures, stating that Defendants could and would manufacture lighting fixtures identical to those set forth in the specification sheets. The specification sheets were designed, created, manufactured, and published by *National* and were provided to the Bridge Defendants. (True and correct copies of the specification sheets which Defendants' representative provided to National's President, indicating specifications for National lighting fixtures and bearing National's name, logo, address and other identifying information, are marked and attached collectively hereto as Exhibit "D".) Lemberg, in the course of selling switchgear to electrical distributors (to some of whom National was selling specification grade lighting fixtures) solicited fixture business on a regular basis, routinely shredding the Confidentiality Agreement, and telling the potential clientele he was manufacturing for National but could manufacture fixtures just like National's for a less expensive price. Upon information and belief, one of the customers Lemberg routinely solicited is now an employee of Picasso and/or Green Light.

Tortious Interference by Bloomberg and the Bloomberg Entities

41. National recently has learned that, after the Bridge Defendants breached the Confidentiality Agreement, the Bridge Defendants conspired with Bloomberg to form the entities Picasso, Green Light, and Independent. Picasso, Green Light, and Independent (referred to collectively as the "Bloomberg Entities") were formed to act, and are acting, in concert with Bloomberg and the Bridge Defendants to handle the marketing of the lighting fixtures cloned from the National Product line. Bloomberg also has been and currently is assisting the other Defendants to manufacture, engineer, create, market,

advertise, and sell fluorescent lighting fixtures based on the Confidential Information the Bridge Defendants wrongfully purloined from National.

42. Prior to the creation of the Bloomberg Entities, Bloomberg had approached National purportedly to discuss an arrangement whereby Bloomberg would become the prime sales representative for National and, if National were sold, Bloomberg, who told National he could increase their sales volume and make National an attractive takeover target for another lighting manufacturer, would receive a substantial sum from any sales price. National disclosed to Bloomberg in the course of these negotiations several aspects of the relationship between National and the Bridge Defendants, including: the potential merger, the disclosure of Confidential Information by National to the Bridge Defendants pursuant to the Confidentiality Agreement, and the tutelage and training National provided to the Bridge Defendants.

43. As part of these discussions Bloomberg also considered forming a sales agency with National to market National's products. Bloomberg instead formed the defendant entity "Picasso" as a vessel to duplicate the National line of products. After forming Picasso, Bloomberg continued to carry on negotiations for an equity interest in National, questioning National's President about National's relationship with the Bridge Defendants. Ultimately, Bloomberg used the information gleaned from National's President to act in concert with Defendants as described herein. National believes that Bloomberg, at all material times, already was acting in concert with the other Defendants and was a conspirator in their plan to tortiously interfere with the Confidentiality Agreement and induce Bridge to breach that Agreement.

44. Bloomberg was aware of the Agreement and its terms and conditions from his discussions with National. In addition, prior to filing this litigation, National put Bloomberg on notice of the actual terms and conditions of the Agreement by forwarding to him a copy of the Agreement.

45. At all times relevant to this action, Bloomberg and the Bloomberg Entities acted in concert and as each other's controlling person, controlling entity, agent, and/or alter ego. Bloomberg and the Bloomberg Entities had, at all times relevant to this action, personal knowledge of the valid Confidentiality Agreement between National and the Bridge Defendants.

46. Upon information and belief, Bloomberg used his knowledge and standing in the lighting industry as the former president of The Lighting Group of New York to influence, encourage, pressure, and/or solicit the Bridge Defendants to breach the Confidentiality Agreement. In so doing, Bloomberg and the Bloomberg Entities deliberately interfered with, and intentionally procured the breach of, the Confidentiality Agreement by the Bridge Defendants. By conspiring with the Bridge Defendants to manufacture, market and sell products created from the purloined Confidential Information, Bloomberg and the Bloomberg Entities continue to interfere in the contractual relationship between National and the Bridge Defendants.

47. The conduct of Bloomberg and the Bloomberg Entities was and is intentional, willful, wanton, malicious, oppressive, and reckless. As a direct and proximate result of their conduct, and the Bridge Defendants' breach of the Confidentiality Agreement, National suffered and continues to suffer damage in an amount according to proof.

Defendants' Lanham Act Violations Including Trade Dress Infringement and Reverse Palming Off; Unfair Competition; and Tortious Interference with National's Prospective Economic Relations

48. Upon information and belief, Defendants are now collectively manufacturing and selling, to National's customers and potential customers, lighting fixtures based on the Confidential Information and trade secrets they misappropriated from National. Defendants are also marketing to National's very same clientele these unlawfully manufactured lighting fixtures. Upon information and belief, Defendants have entered the architectural grade lighting market in metropolitan New York, where the bulk of National's clients are located, and have sold to at least one third party products they tout as identical to National's without National's permission or approval.

49. As National's President has personally witnessed, Defendants' products are so similar in appearance to National's and infringe on National's distinct trade dress such that there is a substantial likelihood that consumers of architectural grade lighting fixtures will be confused as to the identity and origin of Defendants' fixtures. Indeed, Defendants' products are created using the very same specifications created by National and are clones of the National products. Upon information and belief, Defendants have sold fixtures based on National's specifications, palming them off as their own. Defendants' conduct, including their causing a likelihood of confusion among the consuming public, constitutes infringement and dilution of the trade dress of National's products.

50. Defendants not only have purloined National's confidential trade secrets. They also attempt to rob National of its hard-earned goodwill. Under the auspices of the Confidentiality Agreement, National provided Defendants with the identities and contact

information of several of their clients. Many of them have been National's customers for over half a century. National has cultivated products with these clients over the years, presenting fixtures and fine-tuning them over periods of several years to achieve acceptance under the clients' standards.

51. Defendants unfairly are using the misappropriated trade secrets and intentionally confusing consumers as to the designation of their products, all on the secondary meaning associated with National's fixtures and the considerable goodwill developed exclusively by National. Defendants are acting in concert to palm off their products as identical to National's to the same clientele to whom National has catered for over fifty years. Without the trade secrets National diligently developed over the course of sixty-six (66) years, Defendants would be irrelevant in the lighting fixture specification community for many years before becoming recognized and accepted.

52. By purloining National's trade secrets, Defendants have entered the lighting fixture market years earlier than they would have without the trade secrets. They wrongfully attempt to gain an unfair advantage over National by using pilfered trade secrets to jump-start their entry into the business, and to falsely advertise and deceptively palm off their products so as to confuse and deceive the public about the true origin of the fixtures. Defendants' conduct amounts to unfair competition against National. Defendants' conduct, including its unfair competition against National, has directly and proximately caused, and continues to cause, interference with National's Confidentiality Agreement and its prospective economic relations with existing and potential clientele.

53. Defendants' conduct was and is intentional, willful, wanton, malicious, oppressive, and reckless. The conduct of each of the Defendants, and all of them, acting

in concert and as each other's controlling person, controlling entity, agent, and alter ego, constitutes violations of federal law under Section 43(c) of the Lanham Act, 15 U.S.C. § 1125 and the laws of the state of New York as set forth herein, as well as other independent, actionable torts. Defendants' conduct is further unjustly enriching the Defendants at the expense of National.

54. As a result of Defendants' conduct, National has suffered damages, and will continue to suffer damages, in an amount according to proof but believed to be in excess of thirty million dollars (\$30,000,000.00). Unless the declaratory and injunctive relief requested herein are granted, National will likely suffer irreparable injury as a result of Defendants' conduct. Accordingly, National brings this action for monetary damages and injunctive relief.

FIRST CAUSE OF ACTION
Trade Dress Infringement
(Against All Defendants)

55. National realleges and reasserts each allegation set forth above as if fully set forth herein.

56. Defendants' conduct as alleged herein constitutes infringement of National's trade dress, in violation of Section (43)(a) of the Lanham Act, 15 U.S.C. § 1125(a). As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

57. Defendants' conduct as alleged herein is and was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting enhanced, treble and punitive damages and attorneys' fees pursuant to 15 U.S.C. § 1117(a).

SECOND CAUSE OF ACTION

**Reverse Palming-Off
(Against All Defendants)**

58. National realleges and reasserts each allegation set forth above as if fully set forth herein.

59. Defendants' conduct as alleged herein constitutes reverse palming-off of National's product as Defendants' own, in violation of Section (43)(a) of the Lanham Act, 15 U.S.C. § 1125(a). As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

60. Defendants' conduct as alleged herein was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting enhanced, treble and punitive damages and attorneys' fees pursuant to 15 U.S.C. § 1117(a).

THIRD CAUSE OF ACTION

**False Advertising and Labeling
(Against All Defendants)**

61. National realleges and reasserts each allegation set forth above as if fully set forth herein.

62. Defendants' conduct as alleged herein constitutes false advertising and labeling so as to intentionally cause confusion of product identity among consumers, in violation of Section (43)(a) of the Lanham Act, 15 U.S.C. § 1125(a). As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

63. Defendants' conduct as alleged herein was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting enhanced, treble and punitive damages and attorneys' fees pursuant to 15 U.S.C. § 1117(a).

FOURTH CAUSE OF ACTION
False Designation of Origin
(Against All Defendants)

64. National realleges and reasserts each allegation set forth above as if fully set forth herein.

65. Defendants' conduct as alleged herein constitutes false designation of origin, in violation of Section (43)(a) of the Lanham Act, 15 U.S.C. § 1125(a). As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

66. Defendants' conduct as alleged herein was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting enhanced, treble and punitive damages and attorneys' fees pursuant to 15 U.S.C. § 1117(a).

FIFTH CAUSE OF ACTION
Unfair Competition
(Against All Defendants)

67. National realleges and reasserts each allegation set forth above as if fully set forth herein.

68. Defendants' conduct as alleged herein constitutes unfair competition, in violation of Section (43)(a) of the Lanham Act, 15 U.S.C. § 1125(a). As a direct and proximate result of Defendants' conduct, National has been harmed in an amount

according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

69. Defendants' conduct as alleged herein was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting enhanced, treble and punitive damages and attorneys' fees pursuant to 15 U.S.C. § 1117(a).

SIXTH CAUSE OF ACTION

Breach of Contract

(Against Defendants Bridge, Galaxy, Messa, Fredella, Lemberg, Bregman)

70. National realleges and reasserts each allegation set forth above as if fully set forth herein.

71. Defendants' conduct as alleged herein constitutes breach of contract in violation of the laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

SEVENTH CAUSE OF ACTION

Breach of Implied Covenant of Good Faith and Fair Dealing

(Against Defendants Bridge, Galaxy, Messa, Fredella, Lemberg, Bregman)

72. National realleges and reasserts each allegation set forth above as if fully set forth herein.

73. Defendants' conduct as alleged herein constitutes breach of the implied covenant of good faith and fair dealing in violation of the laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

EIGHTH CAUSE OF ACTION

**Reverse Palming Off
(Against All Defendants)**

74. National realleges and reasserts each allegation set forth above as if fully set forth herein.

75. Defendants' conduct as alleged herein constitutes reverse palming off in violation of the laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

NINTH CAUSE OF ACTION

**False Advertising and Labeling
(Against All Defendants)**

76. National realleges and reasserts each allegation set forth above as if fully set forth herein.

77. Defendants' conduct as alleged herein constitutes false advertising and false labeling in violation of the general business laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

TENTH CAUSE OF ACTION

**Unfair Competition
(Against All Defendants)**

78. National realleges and reasserts each allegation set forth above as if fully set forth herein.

79. Defendants' conduct as alleged herein constitutes unfair competition in violation of the laws of the state of New York. As a direct and proximate result of

Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

ELEVENTH CAUSE OF ACTION

**Deceptive Trade Practices
(Against All Defendants)**

80. National realleges and reasserts each allegation set forth above as if fully set forth herein.

81. Defendants' conduct as alleged herein constitutes deceptive trade practices in violation of the general business laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted.

TWELFTH CAUSE OF ACTION

**Unjust Enrichment and Imposition of Constructive Trust
(Against All Defendants)**

82. National realleges and reasserts each allegation set forth above as if fully set forth herein.

83. Defendants' conduct as alleged herein has caused them to be unjustly enriched at National's expense in violation of the laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted. Accordingly, National demands that a constructive trust be imposed for National's benefit on all revenues derived from the sale of any products manufactured by Defendants based on, arising out of, or otherwise derived from National's Confidential Information or National's products.

THIRTEENTH CAUSE OF ACTION

Tortious Interference with Contractual Relations

(Against Defendants Bloomberg, Picasso, Independent, and Green Light)

84. National realleges and reasserts each allegation set forth above as if fully set forth herein.

85. The conduct of Defendants Bloomberg, Picasso, Independent, and Green Light and as alleged herein constitutes tortious interference with the contractual relations between National and the Bridge Defendants, in violation of the laws of the state of New York. As a direct and proximate result of Defendants' conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted. Defendants' conduct as alleged herein is and was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting punitive damages.

FOURTEENTH CAUSE OF ACTION

Tortious Interference with Prospective Economic Relations

(Against All Defendants)

86. National realleges and reasserts each allegation set forth above as if fully set forth herein.

87. The conduct of Defendants as alleged herein constitutes tortious interference with the contractual relations between National and National's existing and potential clientele, in violation of the laws of the state of New York. As a direct and proximate result of their conduct, National has been harmed in an amount according to proof, and will suffer further, irreparable injury unless the requested relief is granted. Defendants' conduct as alleged herein is and was intentional, willful, wanton, malicious, oppressive, and reckless, thus warranting punitive damages.

JURY TRIAL DEMAND

National requests a jury trial on all causes of action, which entitles it to a trial before a jury.

DEMAND FOR RELIEF

WHEREFORE, National prays for judgment as to each Defendant, and all of them, jointly and severally, as follows, that:

A. Defendants, and their agents, employees, servants, representatives, successors in interest, and all those in concert with Defendants, be preliminary and permanently enjoined from:

1. Using in any manner the information designated as Confidential Information as referenced herein;

2. Manufacturing, creating, designing, marketing, selling, advertising producing, making, or otherwise using in any manner any lighting fixture not originating with National, that is likely to cause confusion, deception, or mistake or that dilutes or is likely to dilute the distinctive quality thereof;

3. Passing off, inducing, or otherwise enabling others to sell or pass off any products as and for products produced by National, not Defendants' or not produced under the control and supervision of National and approved by National for sale as National's;

4. Engaging in any other conduct that tends to falsely represent, or is likely to confuse, mislead, or deceive purchasers, Defendants' customers, National's customers, and other members of the public to believe that Defendants' products are

connected with National or are sponsored, approved, or licensed by National, or are in any way connected or affiliated with National;

5. Further infringing National's trade dress;
6. Further damaging National's goodwill; and
7. Assisting, aiding, or abetting any other person or business entity in engaging in or performing any of the activities referred to in subparagraphs 1-7 herein.

B. National be awarded compensatory damages in an amount to be determined at the time of trial but believed to be in excess of \$30,000,000, and that such damages be enhanced and/or trebled;

C. National be awarded punitive damages;

D. All gross revenues earned by Defendants through the time of trial as a result of the conduct alleged herein be held in constructive trust and paid over to National and increased as appropriate under the exceptional circumstances of this case;

E. National recover its reasonable attorneys' fees, costs, and expenses incurred herein;

F. Plaintiffs be awarded prejudgment and post-judgment interest at the legal rate; and

G. Plaintiffs recover such other and further relief as this Court deems just and proper.

Signed this 6th day of June, 2008.

Submitted by,

SHUSTAK & PARTNERS, P.C.
ERWIN J. SHUSTAK



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